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ABSTRACT

Because of concern that too many graduates of seven postsecondary vocational institutes in southwestern Minnesota were migrating from the area to seek employment elsewhere, a study was conducted to determine who migrates, the reasons for migration, and the number of graduates migrating. Migrants were defined as vocational institute graduates who lived more than 50 miles from the community of origin. A high demand for workers with the training provided by the vocational institutes exists in southwestern Minnesota. A questionnaire was mailed to more than 2,000 graduates of the classes of 1977 and 1979, with a 66 percent response after followup. The migration rate for the graduates was 31 percent, less than had been expected. The findings of the study indicate that factors related to decisions to migrate or not were quite different for those who remained and for those who left. Factors most important for the nonmigrant group were proximity of friends and relatives, leisure time activities, climate, quality of public schools, quality of environment, physical safety, pleasantness of living, and closeness of work. On the other hand, migrants gave more thought to leaving the community for the following reasons: starting pay, fringe benefits, advancement opportunities, further education, public transportation, and location of workplace. Data gathered in the study can be used in job counseling and further research. (KC)

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Factors Influencing the Geographic Migration of New Entrants to the Labor Force from Area Vocational-Technical Institutes in Southwest Minnesota

by
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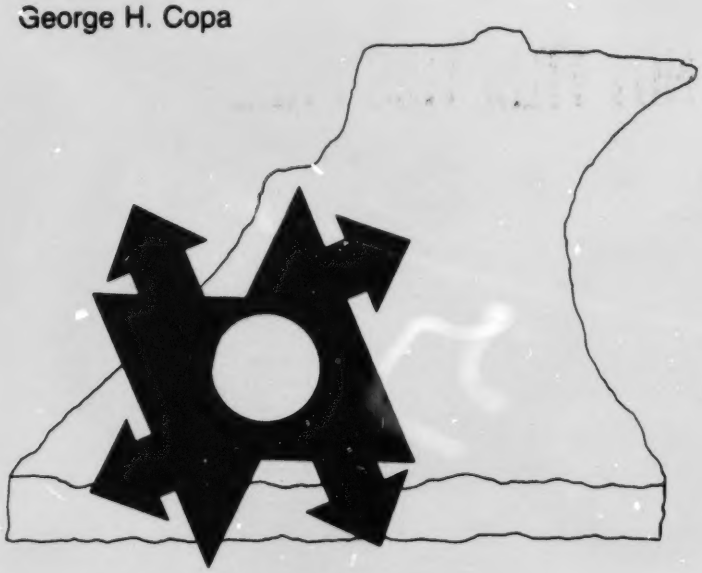

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JUNE, 1981

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PREFACE

The authors wish to express appreciation for the support and assistance of many individuals in completing this study. First, to Med Chottepanda and Rudy Pinola, our project officers in the Minnesota Department of Economic Security for their advice and patience throughout the study. Second to Michael Casey and his staff at the Regional Labor Market Information Office in New Ulm, Minnesota for assistance in laying the "groundwork" for the study and their thorough and systematic collection of the data. Third to the Area Vocational-Technical Institute directors and staff at Canby, Granite Falls, Hutchinson, Jackson, Mankato, Pipestone, and Willmar who provided some initial directions for the study, reviewed the questionnaire, provided a cover letter on their institute's stationery and allowed access to their former students. Fourth to Delores Pospesel in the Minnesota Department of Education who helped provide the names and addresses of former students through the Minnesota Vocational Follow-up System. Fifth, to Timothy Welo, a colleague in the Minnesota Research and Development Center for Vocational Education, for his work with the computer which facilitated the analysis of data. Sixth, to David Rosenbloom for assisting in coding the data, preparing it for analysis and doing much of the actual data processing. Last, we wish to thank Conny Rime for conscientiously transforming disarray into neat copy in typing this manuscript.

ABSTRACT

The Minnesota Department of Economic Security was concerned that a number of graduates of seven post-secondary vocational institutes located in Southwestern Minnesota were leaving (migrating from) the area to seek employment elsewhere. At the same time there appeared to be a high demand for workers in the area in certain occupations for which the AVTIs were providing training.

A conceptual framework to explain geographic migration of AVTI graduates was developed to identify factors related to their decision to (a) stay within the community of origin (place of residence prior to AVTI attendance), or (b) leave the community of origin for a new destination. Nonmigrants were defined as AVTI graduates who lived less than 50 miles from the community of origin, and migrants as AVTI graduates who lived 51 or more miles from the community of origin.

The specific objectives of the study were to answer three questions about the factors related to geographic migration of AVTI graduates: (1) Who are the migrants? (2) Why do they migrate? (3) Where do they migrate?

Previous research concerning geographic migration was used to develop the conceptual framework for the study to identify those factors or combination of factors which were perceived as relevant and important for an individual to either decide to seek employment in the community of origin, or to locate employment in another community. Factors which may facilitate the geographic migration of AVTI graduates may include, but are not limited to (a) economic, (b) social, (c) cultural, (d) educational, and/or (e) personal factors.

A questionnaire was developed, pilot tested, and revised before it was mailed to over 2000 AVTI graduates of the classes of 1977 and 1979 of seven different AVTIs who graduated from one of 14 different vocational programs in Southwest Minnesota. The survey was initially mailed to these graduates by the Labor-Market Information Center at New Ulm and subsequently followed up by the agency via (a) two follow-up letters two and four weeks

later, and (b) telephone contact with the graduates or their parents if possible. The questionnaire requested from each respondent information about (a) their community of origin, (b) attendance at the AVTI, (c) factors influencing selection of first job and first place of residence, and (d) current information. The relatively simple questionnaire together with the three phase follow-up procedure produced a 66% response.

The migration rate for the AVTI graduates was only 31 percent. Thus indicating that the problem of migration from the community of origin was not as extensive as was originally expected. The descriptive/personal attributes of the migrants and the non-migrants were quite similar, except for the program from which they graduated and the relatedness of their first job to their vocational program.

The findings of the study indicate that factors related to decision to migrate or not migrate were quite different for the migrant and non-migrant graduates. For example, the factors which were most important for the non-migrant group were (a) proximity of friends and relatives, (b) leisure time activities, (c) climate, (d) quality of public schools, (e) quality of general environment, (f) physical safety, (g) pleasantness of living, and (h) closeness to work.

On the other hand, migrants appeared to give more thought to the decision to leave the community of origin than non-migrants for the following reasons: (a) starting pay, (b) fringe benefits, (c) advancement opportunities, (d) further education or training opportunities, (e) public transportation services, and (f) location of workplace. Nearness of friends and relatives was rated as important by the fewest number of migrants.

Recommendations for use of existing migration data concerning vocational graduates and future geographic migration studies include, but are not limited to: (a) providing students, employers, teachers, and labor market specialists with information about factors influencing migration decisions, (b) providing students, counselors, and teachers with information on the location of related jobs and area occupational demands and shortages, (c) revising the questionnaire and improving response rate, and (d) exploring different analytic techniques to determine the relative importance of geographic migration factors.

TABLE OF CONTENTS

	Page
PREFACE	ii
ABSTRACT	iii
Chapter I. INTRODUCTION	1
Purpose of Study	1
Examining the Migration Process	1
Brief Description of Southwest Minnesota	2
Chapter II. METHOD OF STUDY	7
Population and Sample	7
Questionnaire Development	11
Data Gathering Process	13
Data Coding	15
Data Analysis and Reporting Procedure	16
Chapter III. WHO ARE THE MIGRANTS?	17
Proportion Migrating	17
Proportion of Each Sex	17
Marital Status	18
Age	18
Length of Time in Community of Residence Before Attending AVTI	19
Place of Residence Before Attending AVTI	19
Rate of Migration for Each Vocational Education Program	20
Average Length of Vocational Education Program Attended	21
Migration Rates for Graduates of 1977 and 1979	21
Rate of Employment in Training Related Jobs	22
Discussion of Findings About Migrants	22
Chapter IV. WHY DO THEY MIGRATE?	25
Perceptions of Community of Residence Before Attending AVTI	25
Overall Satisfaction with Community of Origin	25
Evaluation of Specific Characteristics of Community of Origin	26
Discussion of Findings about Community of Origin	26
Importance of Factors in Choosing First Job and First Place to Live	28
Desired Chracteristics of First Job.	29
Desired Characteristics of First Place to Live	29
Discussion of Findings Concerning First Job and First Place to Live	29
Migration Decision Making Process	32
Amount of Thought	33
Amount of Choice	34
Certainty in Type of Job Wanted	34
Assistance by Others	35
Satisfaction with Decision	36
Discussion of Findings About Decision-Making Process	36

Page

Chapter V. WHERE DO THE MIGRANTS GO? 39

Distance Traveled 39
Outside of Southwest Minnesota 39
Moving to Other Specific Areas of the State 39
Return Migration to Southwest Minnesota 41
Discussion Concerning Where the Migrants Go 42

Chapter VI. A STRUCTURE FOR THINKING ABOUT GEOGRAPHIC MIGRATION OF POST SECONDARY VOCATIONAL EDUCATION GRADUATES IN RURAL AREAS 43

General Structure for Thinking About Geographic Migration . . . 43
Specific Structure for Thinking About Geographic Migration of Post Secondary Vocational Education Graduates in Rural Areas 45

Chapter VII. STUDY RECOMMENDATIONS 51

Recommendations for Practice 51

Potential Students of Vocational Education Program 51
Vocational Educators 52
Labor Market Information Specialists 52
Employers 52

Recommendations for Further Study 53

REFERENCES CITED 55

APPENDIX A QUESTIONNAIRE 57

APPENDIX B COVER LETTER 63

APPENDIX C OCCUPATIONS ENTERED BY MIGRANTS FROM EACH VOCATIONAL EDUCATION PROGRAM 65

Chapter I

INTRODUCTION

Why is there sometimes not a match between the supply of and the demand for workers in certain occupations and in a specific geographic area? One of the reasons may be that some potentially qualified workers, who would normally be available, choose to leave the geographic area. Vocational education programs represent one source of newly qualified workers in a given geographic area. Why is it that vocational education program graduates sometimes choose to leave their home area even though there is a shortage of workers in the specific occupations for which they have been prepared?

PURPOSE OF STUDY

The purpose of this study was to learn more about the factors influencing the migration decisions of vocational education program graduates in geographic areas of shortage occupations. Specifically, the intent was to describe the extent of migration, differences between migrants and non-migrants, reasons for migration, and where the migrants were going. The geographic area selected for study was Southwest Minnesota. The vocational education programs examined were those administered by the post secondary area vocational-technical institutes in this area. Better understanding of the mobility phenomena for graduates of these programs in an occupational shortage area, such as Southwest Minnesota, should assist in developing strategies for bringing occupational supply and demand into better balance in these areas.

EXAMINING THE MIGRATION PROCESS

A review of past studies leads to the conclusion that there are many factors which might influence a person's decision to migrate.[1] These factors can be categorized as follows:

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[1] A detailed analysis of related past studies can be found in Gutheil, B.M. Factors Influencing the Geographic Migration of Graduates of Post Secondary Vocational Education Programs in Rural Areas. (Doctoral disseration, University of Minnesota, 1981).

1. Personal values (i.e., personal freedom, recreational opportunities, educational opportunities, personal safety, healthy living)
2. Relationships (i.e., relatives and friends, property ownership, membership in organizations)
3. Distance (i.e., monetary costs of move, availability of information about other place)
4. Occupational status (i.e., level of training necessary for the occupation, occupational success)
5. Job availability and income (i.e., number of job openings, prospect of unemployment, present income, future income).

The migration decision involves consideration of these factors relative to a community of origin (present home) and possible other communities (possible destinations). Each individual may weigh the importance of each factor differently. For some, closeness to relatives is positive and important; for others, opportunities for independence and privacy are more preferred. Therefore, each factor has both an importance and positiveness or negativeness (direction) about it for a given individual.

Findings of previous research go on to show that an individual sorts out which factors are positive, negative or neutral and which are important. Facts are gathered about the present community of residence and potential other communities. As long as the present community of residence is judged more desirable in terms of these factors, individuals may not consider a move. However, when another community (or communities) appears to potentially provide more satisfaction, the decision to migrate becomes a serious option. For some, this whole decision making process is very "thought-out" and deliberate; for others the decision is made on the "spur of the moment."

BRIEF DESCRIPTION OF SOUTHWEST MINNESOTA

Southwest Minnesota is a rural area with boundaries as shown in Figure 1. It is composed of 27 counties with an estimated population for 1980 of 532,300. In size, the geographic area is about 150 miles from north to south and 150 miles from east to west. The largest community located in the area is Mankato with an estimated population of 31,000. The next largest community is Willmar with an estimated population of 13,600. There are seven area vocational-technical institutes located in Southwest

Figure 1. The State of Minnesota and the location of Southwest Minnesota area.

Minnesota; their locations are Canby, Granite Falls, Hutchinson, Jackson, Mankato, Pipestone, and Willmar.

The industrial employment by major category is shown in Table 3 for firms covered under the Minnesota Employment Services Law. Not included are: the self-employed; farms with less than four employees in 20 weeks or payroll of less than $20,000 in any quarter; all railroad transportation employment; insurance and real estate sales people who work only on a commission basis; students working for the school while a full-time student; those employed by a church for religious work; minor children, spouses and parents working for the owner of a business; elected officials at the Federal, State and local levels of government, and the Red Lake Chippewa Tribe. The relative importance of the agricultural industry is better explained by examining the amount of personal income derived from farm and non-farm sources which was 33% and 67%, respectively, in 1977. The major sources of non-farm personal income for 1977 were manufacturing (17%), government (13%), service (8%), and construction (6%) (U. S. Department of Commerce, 1980).

The unemployment rate in Southwest Minnesota has been below the statewide average since 1974 as shown in Table 4. The Southwest Minnesota unemployment rate for 1978, on an annual basis, was the lowest rate experienced during the five year period from 1974 to 1978. The list of shortage occupations during 1979 is shown in Table 5 (Southwest Minnesota Labor Market Information Center, 1980). The list of shortage occupations is derived by formula that involves consideration of unfilled openings at the end of each month and registered applicants at the Job Service Office over a period of a year. Several of the listed shortage occupations are appropriate occupations for persons graduating from the seven area vocational-technical institutes in the area.

The question raised in this study was, "Are a large number of AVTI graduates passing up the local opportunities in order to take positions outside Southwest Minnesota and, if so, why?" To answer this question, the Minnesota Department of Economic Security funded this exploratory study as a means to better understand the labor supply phenomenon in Southwest Minnesota.

Table 3

Industrial Employment for Firms Covered by Minnesota Employment Services Law in Southwest Minnesota (1979)

Industry	Average employment	Percent
Agriculture, forestry and fishing	2,380	1.4%
Mining	392	.2
Construction	9,633	5.6
Manufacturing	42,341	24.8
Transportation, communications and utilities	6,578	3.9
Trade	47,798	28.1
Finance, insurance and real estate	6,170	3.6
Services	24,301	14.2
Government	31,030	18.2
Total	170,623	100.0

Source: Research and Statistical Services Office, Minnesota Department of Economic Security. Average Covered Employment and Wages by Economic Region for the Calendar Year 1979, July, 1980.

Table 4

Comparison of Unemployment Rates in Southwest Minnesota and Total State

Year	Southwest Minnesota	Statewide
1974	4.0%	4.3%
1975	5.4%	5.9%
1976	5.3%	5.9%
1977	4.7%	5.1%
1978	3.6%	3.8%

Source: Southwestern Regional Labor Market Information Center, Minnesota Department of Economic Security, 1980.

Table 5

List of Shortage Occupations in Southwest Minnesota (1979)

Bookbinding-machine operator
Sales agent, insurance
Systems analyst
Food processing
Nurse, general duty
Tool and die maker
Fabricating machine occupations
Packager, hand
Welder, arc
Electronics assembler
Slaughtering, breaking, curing, and related
Engineer, mechanical
Drafter, mechanical
Maintenance mechanic
Welder, combination
Electronic technician
Waiter/waitress
Dental assistant
Nurse, licensed practical
Nurse aide
Maintenance repairer, building
Trailer truckdriver
Driver, sales route
Bartender
Assembler, small parts
Automobile-service station attendant
Carpenter

Source: Southwestern Regional Labor Market Information Center, Minnesota Department of Economic Security, 1980.

Chapter II

METHOD OF STUDY

This chapter provides a description of the procedures used to answer the three major questions posed in this study regarding geographic mobility of post secondary vocational-technical education graduates in Southwest Minnesota. These three questions were:

(1) Who are the migrants?

(2) Why do they migrate?

(3) Where do they migrate?

Data to answer these questions were collected largely by mail questionnaire sent to a sample of graduates from the seven area vocational-technical institutes in Southwest Minnesota. This section of the report will describe the population and sample, questionnaire, data collection process, and analysis procedures.

POPULATION AND SAMPLE

Population

The population of concern to this study was composed of graduates from the post secondary area vocational-technical institutes in Southwest Minnesota during the late 1970's. These are full-time, day school students.

Sample

The sample to be studied was selected in five phases. These phases consisted of preliminary decision regarding the sample, followed by a step-wise identification process.

Phase 1. A decision was made to study approximately 2,000 graduates of the seven AVTIs located in Southwest Minnesota. There is a variation of from 13 to 29 different post secondary vocational-technical education programs offered to full-time day school students at these institutes. A sample size of 2,000 was sought in order to provide sufficient responses for analyses in several different ways.

A second preliminary decision was to include the classes of 1979 and 1977 in the study. The most recent class, 1979, and at least one previous year were included in order to view the migration phenomenon over time. A recent year was chosen to provide up-to-date information and because the farther the individuals are in time from the actual decision-making concerning migration, the less accurate the information provided might be. Other, more recent, considerations and feelings might be reflected in the responses, rather than the factors important at the time of graduation. Because there was also interest in information about return migration occurring after the graduates had been employed several years, the class of 1977 was selected.

A third preliminary decision was to purposively select the sample based on the program from which the student had graduated. All students graduating from selected programs were then included in the sample.

Phase 2. The next major step in the identification of the sample was to select the programs to be included in the study. The major criteria for choosing a program were:

(1) A reasonable minimum number of graduates (40).

(2) A reasonable minimum number of AVTIs offering the selected program (3).

(3) Offering of the program in both 1977 and 1979.

Applying these criteria to the vocational education programs being offered resulted in selection of the 14 programs listed in Table 6. These 14 programs included a total of 2739 program completers (referred to as graduates subsequently in this report).

Phase 3. A criterion applied in the third phase of sample selection was that at least some of the programs chosen be those that prepared graduates for occupations appearing on the list of 1979 shortage occupations in Southwest Minnesota. A description of each occupation of interest was obtained from the *Dictionary of Occupational Titles* (1965). Each resulting occupational description was compared to the description of vocational education programs meeting the previous selection criteria in order to identify a corresponding program. Table 7 provides the list of shortage occupations and corresponding vocational-technical programs, where one existed.

Phase 4. The fifth level of selection was based upon representativeness on several criteria. In order to permit later generalization to a broad range of vocational-technical education programs, it was decided that at least some of the selected programs ought to meet preselected criteria. These criteria were:

Table 6

The Number of Graduates at each *AVTI* in Southwest Minnesota for 1977 and 1979 in each Vocational-Technical Education Program Meeting Selected Criteria

Program	AVTI and Year															
	Canby		Granite Falls		Hutchinson		Jackson		Mankato		Pipestone		Willmar		Total	
	1977	1979	1977	1979	1977	1979	1977	1979	1977	1979	1977	1979	1977	1979	1977	1979
Accounting	24	19	---	---	17	30	7	30	1	43	19	12	21	32	89	166
Agri-business	24	34	13	19	---	---	26	2	12	20	19	20	---	32	94	127
Auto mechanics	20	14	---	---	23	24	20	22	20	41	---	21	27	27	110	149
Carpentry	---	---	---	---	---	---	19	11	---	---	13	24	12	17	44	52
Clerical	---	---	28	---	8	10	6	12	35	---	---	---	59	53	136	75
Drafting	---	---	---	8	5	3	18	3	---	5	---	---	19	18	42	37
Electronics	---	---	---	14	---	---	20	9	32	20	---	---	15	21	67	64
Farm business	18	---	---	11	---	---	9	19	27	---	---	---	45	50	99	80
Machine tool	---	---	7	15	15	16	---	---	---	---	---	---	11	20	33	51
Nurse aide	---	---	---	---	---	---	69	50	32	---	---	---	12	---	113	50
Nurse, practical	---	---	---	---	---	---	---	---	36	56	---	---	59	50	95	106
Sales	---	---	---	---	15	24	9	10	31	56	---	---	28	18	83	108
Secretarial	44	40	33	38	22	6	28	12	46	65	15	21	77	78	265	260
Welding	30	14	---	---	33	7	---	---	14	18	---	---	12	16	89	55
Total	160	121	81	105	138	120	231	180	286	324	66	98	397	432	1359	1380

Table 7

Shortage Occupations in Southwest Minnesota and the Corresponding Vocational-Technical Education Program

Shortage occupations	Vocational-technical programs
Bookbinding-machine operator	a
Sales agent, insurance	Sales, marketing and management
Systems analyst	a
Food processing	a
Nurse, general duty	a
Tool and die maker	Machine tool
Fabricating machine occupations	Machine tool
Packager, hand	a
Welder, arc	Welding
Electronics assembler	Electronics
Slaughtering, breaking, curing, and related	a
Engineer, mechanical	a
Drafter, mechanical	Industrial, mechanical drafting
Maintenance mechanic	Machine tool
Welder, combination	Welding
Electronics technician	Electronics
Waiter/waitress	a
Dental assistant	a
Nurse, licensed practical	Practical nursing
Nurse aide	Nurse aide
Maintenance repairer, building	Carpentry
Trailer truck driver	a
Driver, sales route	a
Bartender	a
Assembler, small parts	a
Automobile-service station attendant	Auto mechanics
Carpenter	Carpentry

[a]No corresponding vocational-technical program.

(1) both farm and nonfarm agriculture

(2) varying time-lengths of programs

(3) varying degrees of skill development as determined by comparatively high or low level of skill developed in the programs

(4) varying degrees of prestige of the occupation for which the program is preparing students, with low prestige assigned to blue collar occupations and high prestige assigned to white collar occupations

(5) predominantly male and predominantly female programs, which relates to the fact that the sexes are not equally represented in all vocational programs.

Table 8 lists the 14 programs and indicates their representativeness on these five criteria.

Even though the total of 2739 was considerably higher than the 2000 previously agreed upon, it was felt that by eliminating one or more programs, the representativeness of the sample would be considerably diminished. The decision to use the years 1977 and 1979 was reaffirmed. If one year were eliminated, the representativeness would have been diminished. If additional years were selected, considerations of budget, time, and other constraints would not have been honored.

The sample represents a broad cross section of graduates from the vocational education programs provided in the seven area vocational technical institutes in Southwest Minnesota. Findings from this sample should be applicable to all the graduates completing programs in these institutes.

QUESTIONNAIRE DEVELOPMENT

A single questionnaire with five sections was developed and used. For ease of understanding on the part of the respondent, the sections were titled: (1) Before Attending the AVTI, (2) While at the AVTI, (3) When You Left the AVTI, (4) About Your Decision, and (5) Now. "Before Attending the AVTI" sought information about the community of origin (place of residence before enrolling at AVTI) and the evaluation the respondent had attached to factors characterizing that community. The section titled "While at the AVTI" sought information on the characteristics of the graduate and the graduate's program which would help to answer the question, "Who are the migrants?" Answers to the section, "When You Left the AVTI," first

Table 8

Degree To Which Vocational-Technical Education

Programs Meet Selected Criteria

Program	Agriculture		Predominance		Prestige		Skill		Time	
	Farm	nonfarm	Female	Male	Low	High	Low	High	Short	Long
Accounting						X		X		X
Agri-business		X		X						
Auto mechanics				X						
Carpentry				X						
Clerical			X				X		X	
Drafting				X		X		X		X
Electronics				X		X		X		X
Farm business	X			X	X					
Machine tool				X						
Nurse, aid			X		X		X		X	
Nurse, practical			X			X		X		X
Sales										
Secretarial			X			X		X		X
Welding				X						

distinguished the migrants from the non-migrants, and second, provided information on why the migrants moved and non-migrants did not move. This third section also sought information on the factors which contribute to the decision to move for those who moved and asked for information to answer the question, "Where do they migrate?" The fourth section of the questionnaire, "About Your Decision," was designed to provide information about the way in which the decision to migrate, or not to migrate, was made and who, besides the graduate, was involved in the decision-making. The final section, "Now," sought indication of the extent of return migration. An indepth study on return migration was not planned; the reason for the inclusion of this last dimension in the questionnaire was to gain information to be pursued in further studies.

Questions throughout the questionnaire were of the short answer type: ratings on a five-point scale, a check in the appropriate blank, or a one word or few words fill-in-the-blank. A total of 63 different pieces of information was collected on one sheet of paper folded once to provide four 8 1/2" by 11" pages. The final questionnaire is shown in Appendix A.

A pilot-test version of the questionnaire and cover letter was developed and approved by the University of Minnesota Committee on Human Subjects. In the Committee's review, consideration was given to the non-threatening nature of the questionnaire, non-interference in the rights of the respondents, and an introductory explanation to the respondents of the reason for their inclusion in the study and the intended use of the resulting information.

The pilot-test was administered to 74 randomly selected graduates from the Cook/Chef program and the Refrigeration program at one AVTI from the sample. In addition to the migration questions, information about the questionnaire was also requested. From the resulting feedback, the questionnaire was revised accordingly.[1]

DATA GATHERING PROCESS

The data used in this study were collected specifically for this study. The study emerged from questions raised by the staff of the Minnesota Department of Economic Security; this agency subsequently provided funds to conduct the study. The interest of the Minnesota Department of Economic Security and the Southwestern Minnesota Labor Market Information Office at New Ulm, Minnesota was specifically in Southwestern Minnesota, defined as the area falling within Minnesota Economic Development Regions 6E, 6W, 8, and 9.

An agreement was made with the Southwestern Minnesota Labor Market Information Office, New Ulm, Minnesota to assist in the data collection and coding. As a preliminary step, the Labor Market Analyst from that office and one of the investigators visited each AVTI to be included in the study.

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[1]Detailed information on the assessment of validity and reliability of the questionnaire can be found in Gutheil, B.M. Factors Influencing the Geographic Migration of Graduates of Post Secondary Vocational Education Programs in Rural Areas. (Doctoral dissertation, University of Minnesota, 1981).

The study was discussed with the school's director or an appropriate designee. A Project Brief, which described the project, was also distributed. The AVTI directors gave their perceptions of reasons graduates leave or stay in the area. These perceptions were added to the pool of information used in constructing the questionnaire.

A request was made of the directors for the names and addresses of all those students completing the programs included in the study during 1977 and 1979. It was indicated in several instances that this request could become a burdensome task. An additional effort was suggested.

As recommended by the AVTI directors, the Minnesota Department of Education was contacted to determine the availability of the name and address information through the Minnesota Post Secondary Follow-Up System. The Minnesota Department of Education personnel secured the release of the names and addresses of the appropriate graduates from Educational Management Services, Inc., Minneapolis, Minnesota. This firm currently operates the Follow-Up System and they provided computer print-outs of the latest addresses of the graduates involved in the study.

To increase the response rate on the final questionnaire, the AVTI directors also provided AVTI letterhead stationery with their signature for the questionnaire cover letter. A copy of the cover letter is shown in Appendix B.

The Southwestern Minnesota Labor Market Information Office conducted the data gathering. Prior to mailing, each questionnaire was coded by AVTI, vocational-technical program, year, and student identification number. Corresponding lists were developed to facilitate non-response follow-up.

Using the most recent available address, an initial mailing of a cover letter and questionnaire was sent to 3,128 persons. (Eight were eventually eliminated from the sample because of death or other reasons. This number is higher than the 2739 obtained from individual AVTI records because of differences in counting procedures between the AVTI's and the Minnesota Vocational Follow-Up System.) This mailing resulted in 1348 responses. A redrafted letter and a second questionnaire printed on a differently colored paper were mailed to the non-respondents and resulted in 517 additional responses. A third mailing resulted in 204 responses. The total was 2072 responses--a response rate of 66%. The response rate varied from 61% to 72% for each AVTI.

During the data gathering process, telephone calls were made to non-respondents who could be located or to persons at the last known permanent address. Extensive efforts were made to locate potential respondents through telephone books, information available to the AVTI, or through friends and relatives.

DATA CODING

The Southwestern Minnesota Labor Market Information Office at New Ulm completed the preliminary questionnaire coding according to the directions provided by the investigator. Minnesota addresses were coded according to the 3-digit system for Minnesota cities used by the *Minnesota Secondary School Follow-Up System Procedures Guide* (Irvin & Forsberg, 1980). Additionally, 3-digit code numbers were assigned to communities in Iowa and South Dakota within 50 miles of the Minnesota border and between the most northwestern and southeastern corners of Southwest Minnesota.

Occupations of graduates as given on the returned survey forms were coded according to the 4-digit coding system of the *Standard Occupational Classification Manual* (1977). The rationale for using this manual is that it is currently used in the Minnesota Secondary School Follow-Up System and will be more widely used in vocational education, particularly with the Vocational Education Data System (VEDS). A number of occupations were coded by both the investigator and the Labor Market Analyst to assure consistency of interpretation.

After all responses on the questionnaire were coded by the Labor Market Information Office, the questionnaires were returned to the investigators for further coding. Mileage of all moves was calculated; populations of all communities of origin and of destination were identified; and the degree to which the occupations of all the graduates were related to their vocational-technical education program was judged.

Populations of the communities were gathered from the *Current Population Reports, Population Estimates and Projections,* U.S. Department of Commerce, Bureau of the Census, November, 1979. The July 1, 1977 population estimates were used.

For purposes of comparing migrants with non-migrants, a person moving 51 or more miles was considered a migrant. The figure of 51 miles was influenced

by Mangalam and Schwarzweller's (1970) concept of migration as a phenomenon that produces changes in the interactional system. While rural sparsity necessitates some travel in day to day living for social activities, shopping, working, and other activities such as medical care, the high cost of fuel places a limit on such travel for most people. It was the investigators' judgement that for a move of more than 50 miles, one would have to change the interactional system.

The mileage of each person's move was calculated by hand using the *Official Minnesota Highway Mileage Tables* (1976). If the information was not contained there, a map and map measure were employed. If either the community of origin or the community of destination were outside Minnesota and beyond the 50 mile limit, no attempt was made to calculate the distance of the move, but the individual was considered a migrant.

Relatedness of the occupation selected by the graduates to the vocational program from which they graduated was judged on the investigators' best knowledge of the program and the duties performed on the job. The respondent's listing of duties aided in this judgment. Where a great many of the skills learned in the program were being used on the job, it was considered related. When some of the skills were used, it was coded somewhat related, and where no or very few learned skills were thought to be used, the occupation was considered not related.

The information from each questionnaire was keypunched by the Minnesota Department of Economic Security according to the directions provided by the investigators. The keypunched decks were then returned to the investigators for analysis.

DATA ANALYSIS AND REPORTING PROCEDURE

The data analysis was conducted at the University of Minnesota using standard available statistical analysis programs. The data presented in this report represents descriptive information resulting from the analysis.[1] For ease of reading and interpretation, the data have been converted, where feasible, to pie charts and bar graphs.

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[1] A very detailed and more complex analysis of the data is reported in Gutheil, B.M. Factors Influencing the Geographic Migration of Graduates of Post Secondary Vocational Education Programs in Rural Areas. (Doctoral Dissertation, University of Minnesota, 1981).

Chapter III

WHO ARE THE MIGRANTS?

The findings reported in this chapter address the characteristics of the migrants in comparison to the non-migrants. Remember, as noted earlier, the migrants are those graduates whose community of residence (community of destination) at the time of the survey was more than 50 miles from their community of residence before enrolling in the AVTI from which they graduated (community of origin).

PROPORTION MIGRATING

About 31 percent of the graduates had moved more than 50 miles from their community of origin as shown in Figure 2.

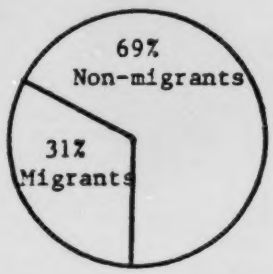


Figure 2. Proportion of graduates who had migrated.

PROPORTION OF EACH SEX

The migrants were about one-half female and one-half male (see Figure 3). A larger share (57%) of the non-migrants were female.

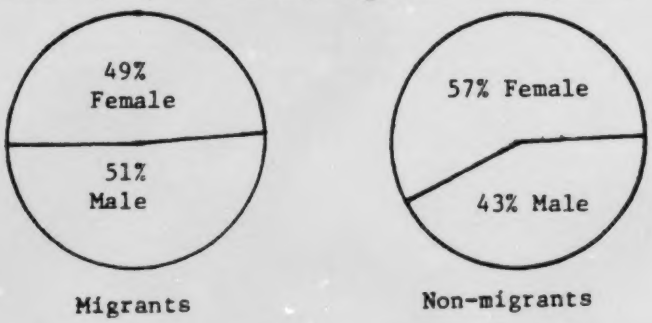


Figure 3. Sex of migrants and non-migrants
(The total sample is 46% male and 54% female).

MARITAL STATUS

A slightly larger proportion of migrants were single (87%) as compared to the non-migrants (84%) (see Figure 4).

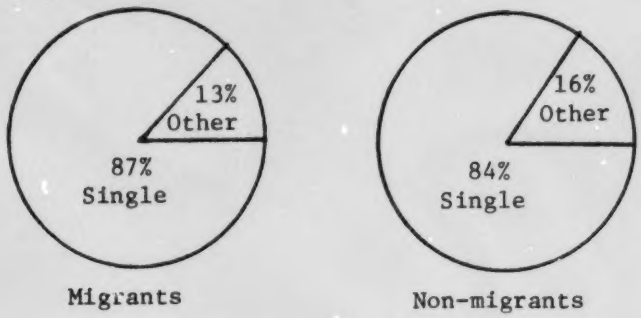


Figure 4. Marital status of migrants and non-migrants.

AGE

The mean age of the migrants and non-migrants was about equal (21 and 21 1/2 years, respectively) as shown in Figure 5.

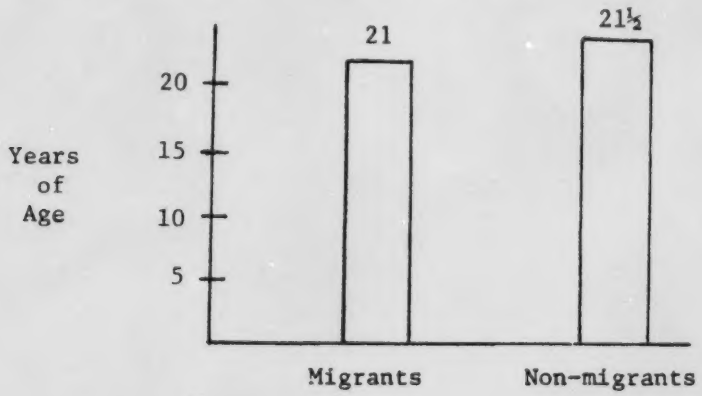


Figure 5. Age of migrants and non-migrants.

LENGTH OF TIME IN COMMUNITY OF RESIDENCE BEFORE ATTENDING AVTI

Both the migrants and non-migrants had spent an average of about 13 1/2-14 years in their community of residence before attending the AVTI (see Figure 6).

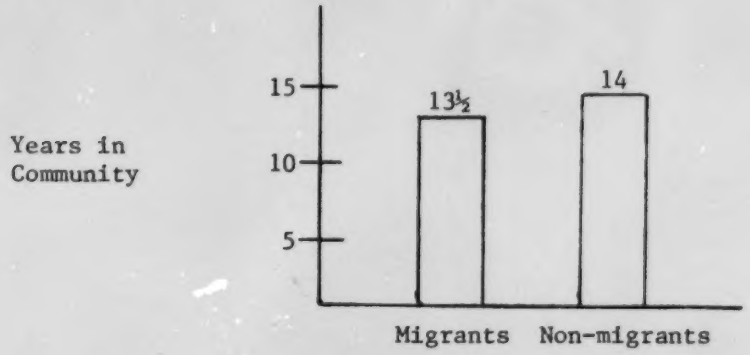


Figure 6. Years in community of origin for migrants and non-migrants.

PLACE OF RESIDENCE BEFORE ATTENDING AVTI

A slightly smaller share (39%) of the migrants lived in a rural, farm residence before attending an AVTI than the non-migrants (46%) (see Figure 7).

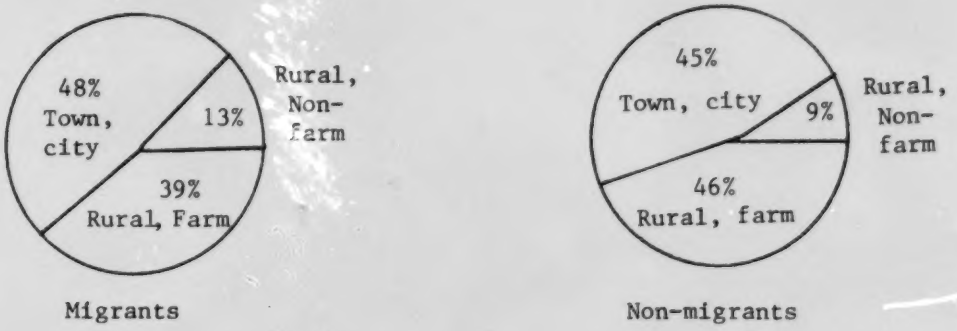


Figure 7. Place of residence before attending AVTI for migrants and non-migrants.

RATE OF MIGRATION FOR EACH VOCATIONAL EDUCATION PROGRAM

There was considerable variation among vocational education programs in the rate of migration as shown in Figure 8. The graduates of the electronics and drafting programs had the highest rate of migration (56 and 54%, respectively), while farm business management program graduates had the lowest rate (7%).

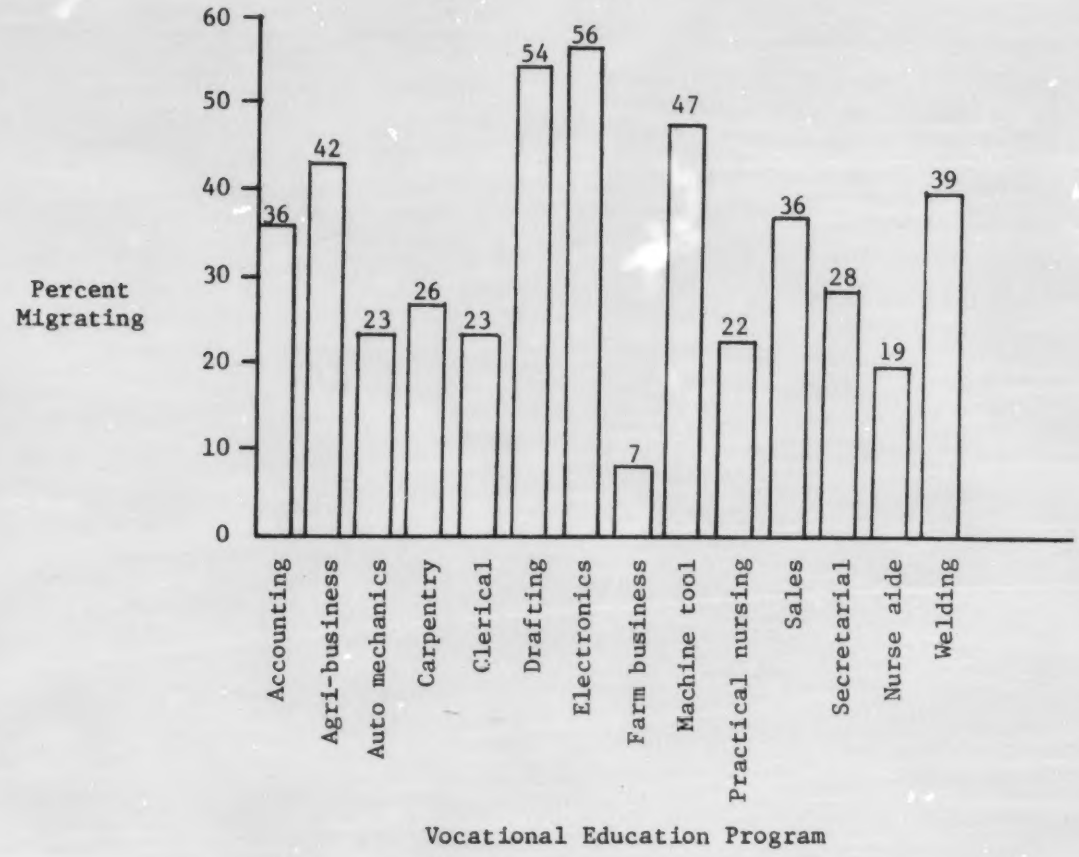


Figure 8. Migration rate for each vocational education program.

AVERAGE LENGTH OF VOCATIONAL EDUCATION PROGRAM ATTENDED

The average length of the vocational-technical education program attended by the migrants was slightly longer (60 weeks) than that for non-migrants (56 weeks) (see Figure 9).

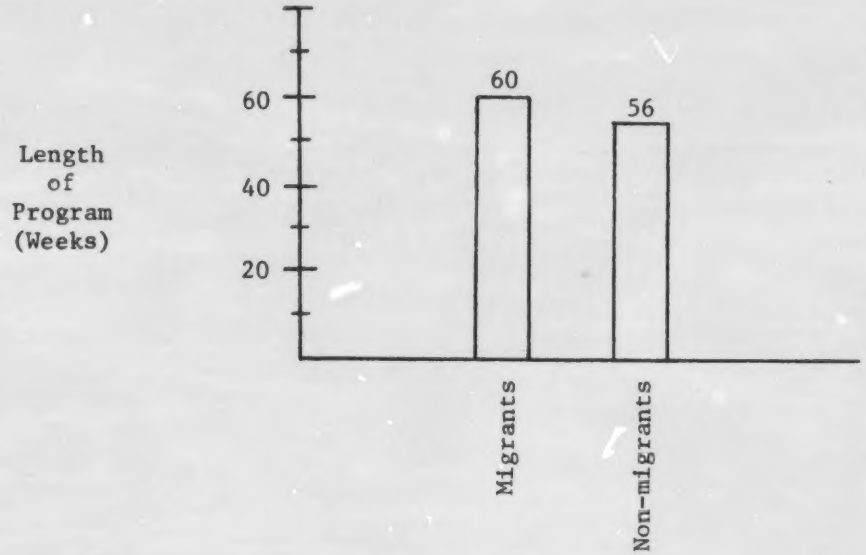


Figure 9. Average length of vocational education program attended by migrants and non-migrants.

MIGRATION RATES FOR GRADUATES OF 1977 AND 1979

The proportion of migrants and non-migrants graduating from the Class of 1977 was similar to the proportion for 1979.

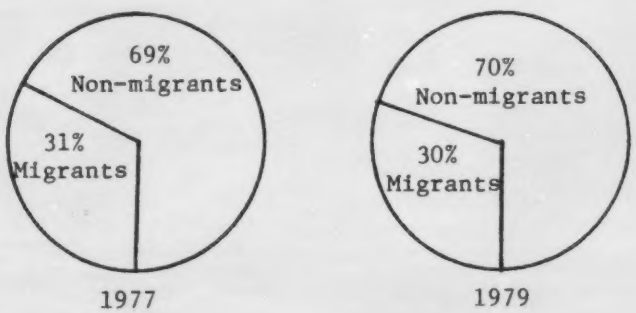


Figure 10. Migration rates for graduates from the classes of 1977 and 1979.

RATE OF EMPLOYMENT IN TRAINING RELATED JOBS

A relatively high proportion of both migrants and non-migrants were employed in occupations related to their training program in an AVTI (see Figure 11). The proportion in related occupations was slightly lower for the non-migrants (79% versus 85%). Perhaps this is an indication that those who chose not to move were more willing to take an unrelated job in order to stay in the same geographic area. The judgment of occupational relatedness was made by the investigators after examining the title and major duties of the occupation in which the graduate was employed and the title and description of the training program from which they graduated. The occupations selected by graduates of each program who migrated are shown in Appendix C.

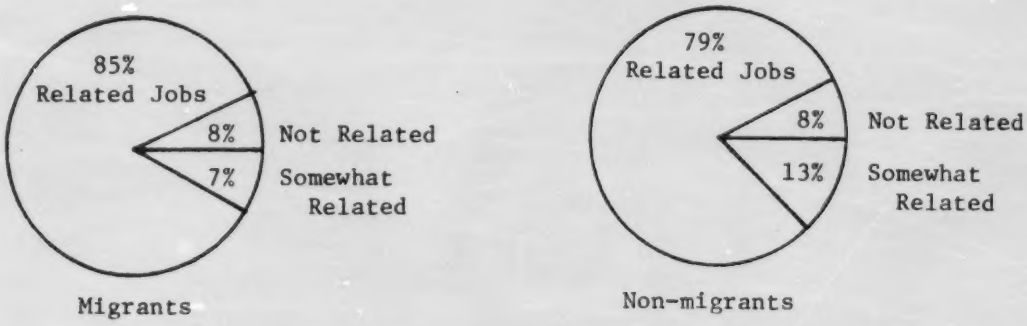


Figure 11. Rate of employment in training related jobs for migrants and non-migrants.

DISCUSSION OF FINDINGS ABOUT MIGRANTS

The characteristics of the migrants as compared to the non-migrants vary only slightly. One reason for the similarity between migrants and non-migrants may be due to the narrow age range being studied. Most studies which have identified differences between migrants and non-migrants have studied the adult population and found the migrants to be the younger. In this particular study, the mean age for the migrants was 21 and for the non-migrants 21 1/2, a very small difference. The fact that migrants and non-migrants were of the same age means that they would tend to be alike on a lot of other characteristics also.

Nonetheless, the program length tends to somewhat distinguish between the migrants and non-migrants. The finding of the migrants being in the longer programs supports Zuiches and Carpenter (1978), among others, who found the migrants to be more highly educated. The four and one half weeks difference may not seem like a lot, but given the similarity in average age for the two groups, it appears significant.

Other studies also pointed out that the migrants tended to be those aspiring to higher occupational status, or that they tended to be the white collar workers. The large variation in migration rates among the vocational programs included in this study seems to partially support this notion. Of the programs having higher than average migration rates, five of the seven tend to prepare graduates for "white collar" jobs. Accounting, agri-business, drafting, electronics, and sales are programs which tend to lead to "white collar" occupations. However, the machine tool and welding programs tend to lead to "blue collar" jobs, yet had higher than average rates of migration.

Chapter IV

WHY DO THEY MIGRATE?

The findings on why the migrants move away from their community of residence before attending an AVTI are presented in three parts. First the perceptions of the migrants toward their community of residence before attending an AVTI (community of origin) are presented. Second, findings concerning the desired characteristics of a first job and a first place to live by the migrants are presented. The third part of the findings presented in this chapter concern characteristics of the decision making process used by the migrants in deciding to move.

PERCEPTIONS OF COMMUNITY OF RESIDENCE BEFORE ATTENDING AVTI

In presenting the findings concerning the migrant's perception of their community of residence prior to attending the AVTI from which they graduated, this community will be referred to as the "community of origin."

Overall Satisfaction with Community of Origin

There appears to be some relationship between satisfaction with community of origin and the decision to migrate as shown in Figure 12. Almost twice the proportion of migrants as compared to non-migrants were dissatisfied with their community of origin. However, an interesting finding was that well over one-half (61%) of the migrants were satisfied overall with their community of origin (yet they decided to move).

Figure 12. Satisfaction with community of origin for migrants and non-migrants.

Evaluation of Specific Characteristics of Community of Origin

When selected characteristics of the community of origin were considered individually, the migrants were generally less pleased with the community of origin than were the non-migrants as shown in Figure 13. The migrants generally thought there were few employment opportunities, low pay for jobs and poor opportunities for further education or training. In addition, about one-half of the migrants felt there were not enough leisure activities in their community of origin. However, the non-migrants also generally thought there were few employment opportunities, and poor opportunities for further education or training. Both the migrants and the non-migrants generally thought the number of friends and relatives nearby was just right, as was the lifestyle.

In further analysis, the migrants were categorized according to their general level of satisfaction with the community of origin (satisfied, dissatisfied, and unsure). Those migrants who were generally "satisfied" with the community thought the lifestyle was just right (85%), the number of friends nearby was just right (73%), the number of relatives nearby was just right (68%), and the leisure activities were just right. However, a large proportion of the migrants, even though satisfied overall with the community of origin, thought the employment opportunities were few (59%), the pay for jobs was poor (52%), and the opportunities for further education or training were poor (47%). Those migrants who were dissatisfied overall with the community of origin were generally dissatisfied with each of the specific characteristics, except for friends and relatives. The migrants dissatisfied overall with the community of origin also thought the lifestyle in the community was too conservative and the opportunities for leisure activities were insufficient.

Discussion of Findings About Community of Origin

Findings from previous studies of migrants suggest that migrants tend to be less satisfied than non-migrants with their community of origin and that the presence of friends and relatives in the community of origin tends to deter migration. This study shows that although there was a higher proportion of migrants than non-migrants who were dissatisfied with their community of origin, slightly over 60 percent of the migrants were satisfied overall with this community. Further, although the migrants were generally satisfied with the life style, number of friends, and number of

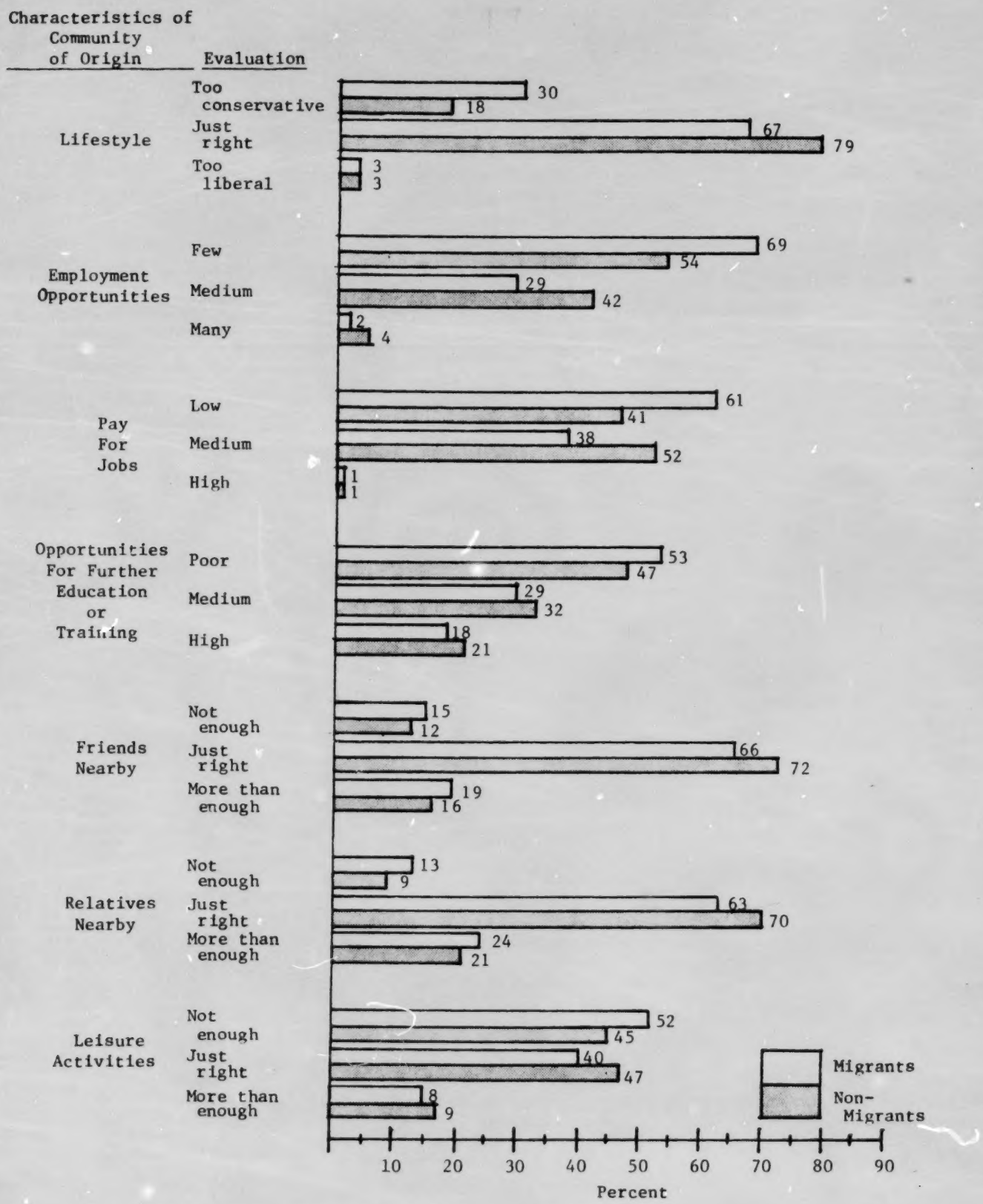


Figure 13. Evaluation of specific categories of the community of origin by migrants and non-migrants.

relatives in the community of origin, they still decided to move. It is possible that these latter three specific factors were responsible for the higher than expected rate of overall satisfaction with the community of origin by the migrants. From the findings, it seems that in spite of the general satisfaction with the above characteristics, the general dissatisfaction with characteristics related to employment opportunities, pay for jobs and opportunities for further education or training were likely related to the decision to move.

IMPORTANCE OF FACTORS IN CHOOSING FIRST JOB AND FIRST PLACE TO LIVE

In addition to evaluating their community of residence before attending an AVTI, graduates were asked to rate the importance of several characteristics in choosing their first job and first place (community) to live. Following the rating of these characteristics, the graduates were asked to indicate which was more important in their decision concerning migration, the place to work or place to live. There were some significant differences in the relative importance of place to work and place to live between the migrants and non-migrants (See Figure 14). Although place to work and place to live were considered equally important by more than half of both groups, place to work was selected as more important by a larger proportion of migrants (37%) than non-migrants (26%).

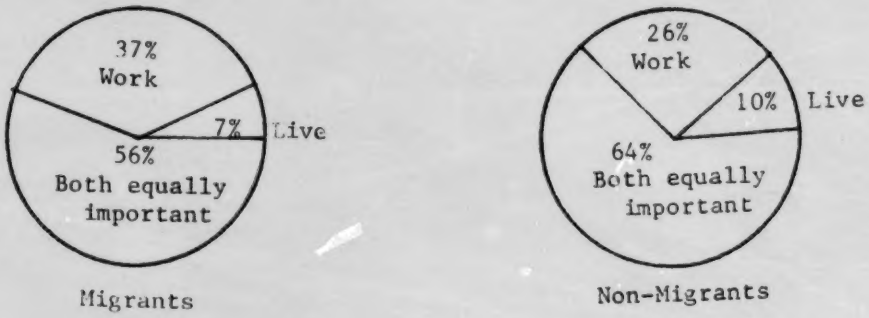


Figure 14. Relative importance of place to work and place to live to the migration decision for migrants and non-migrants.

Following is a description of the findings concerning the importance of specific characteristics in choosing a first job and first place to live.

Desired Characteristics of First Job

The sample of graduates was asked to rate the importance of eleven factors in choosing their first job after leaving the AVTI. The greatest differences between migrants and non-migrants in the frequency of rating a factor as of much or great importance was for starting pay, fringe benefits, opportunities for advancement and convenient location (see Figure 15). The frequency of a high importance rating of the first three was higher for the migrants and for the last factor, higher for the non-migrants. Both migrants and non-migrants were consistent in citing steady employment as the factor most frequently rated as of high importance and starting pay as the factor least frequently rated as of high importance.

Desired Characteristics of First Place to Live

Study respondents were also asked to rate the importance of fifteen characteristics in selecting their first place (community) in which to live after leaving the AVTI. For eleven of the fifteen characteristics there were significant differences between migrants and non-migrants in the frequency with which the characteristic was rated of much or great importance (see Figure 16). Those characteristics cited at a significantly higher rate of high importance by migrants in selecting a place to live were opportunities for further education or training and availability of public transportation. Those characteristics cited as of high importance at a significantly higher rate by non-migrants were number of friends and relatives nearby, availability of leisure activities and medical care, quality of public schools and environment, climate, physical safety, and pleasantness of living. The four factors with similar rates of high importance ratings by both migrants and non-migrants were crime rate, privacy of personal life, housing availability and closeness to work. The percent of migrants rating a characteristic of first place to live as of much or great importance ranged from a high of 59 percent for pleasantness of living to a low of 13 percent for relatives nearby.

Discussion of Findings Concerning First Job and First Place to Live

The findings show both similarities and differences in the migrants and non-migrants concerning the importance of various factors in choosing a first job and a first place to live. There was more similarity between

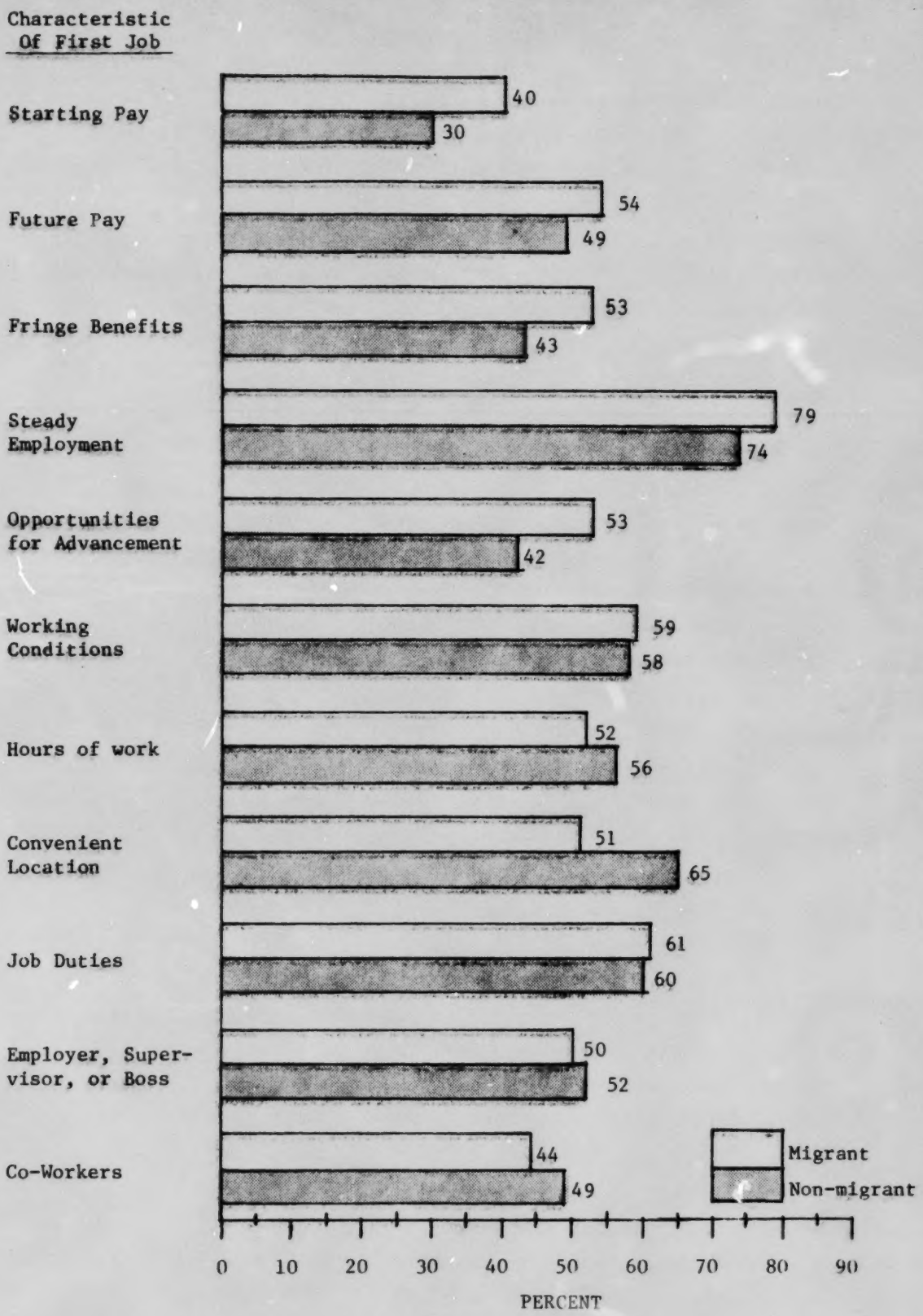


Figure 15. Importance ratings of specific characteristics in choosing a first job by migrants and non-migrants.

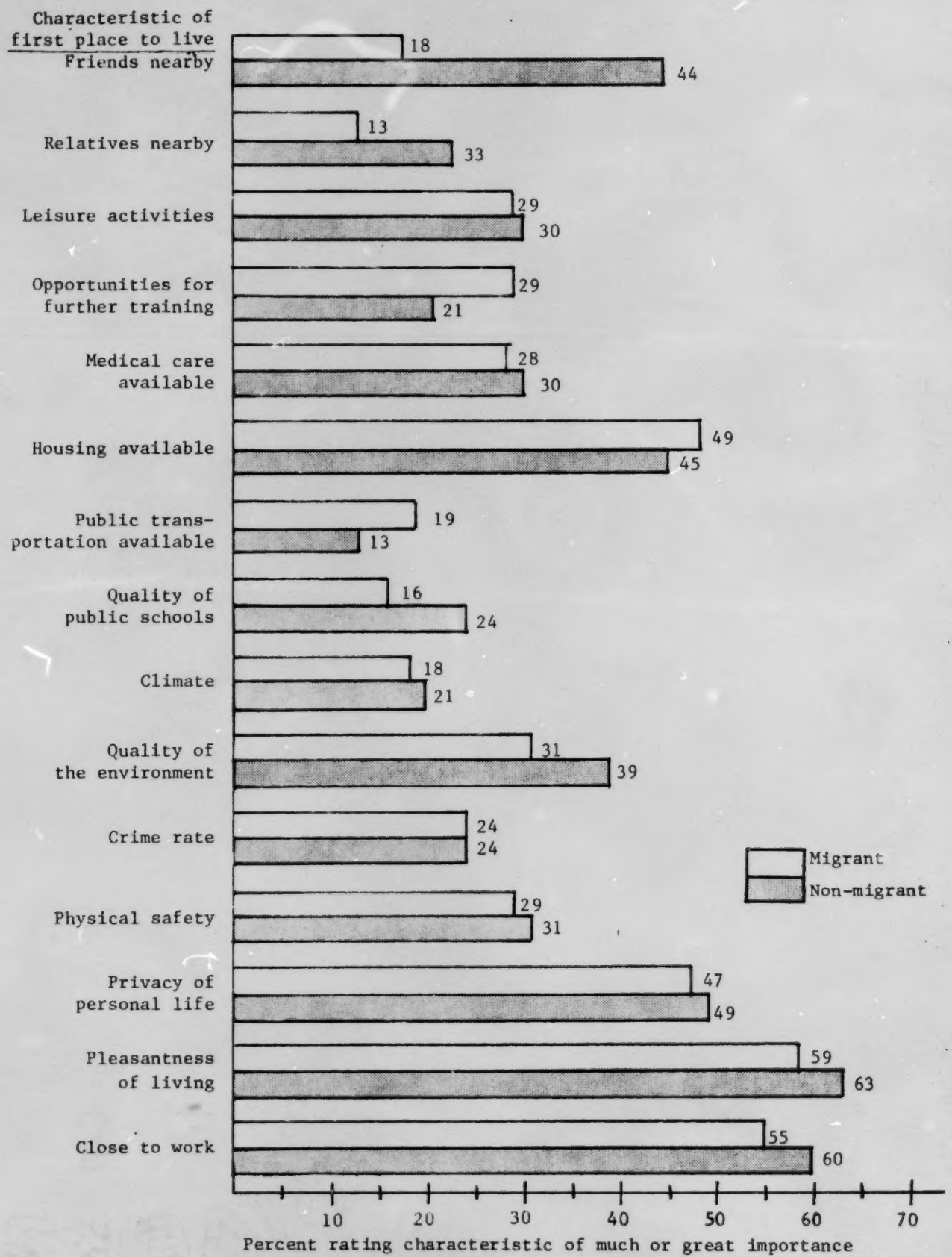


Figure 16. Importance ratings of specific characteristics in choosing a first place to live by migrants and non-migrants

migrants and non-migrants in the importance of characteristics of first job than in place to live. Also, the choosing of a first job was more frequently identified as more important than choosing a first place to live for the migrants as compared to non-migrants. Concerning characteristics of first job, the migrants appear to value starting pay, fringe benefits and opportunities for advancement at a higher rate than non-migrants. Conversely, non-migrants value convenient location at a higher rate. Taken together this information seems to imply that migrants are considering economic factors more often than non-migrants in the decision to move.

Examining the findings concerning characteristics of place to live for migrants and non-migrants serves to confirm that there are consistent differences between migrants and non-migrants in what is important in the selection of a job and place to live. Where migrants were generally more frequently concerned with first job related characteristics of an economic nature, non-migrants are more frequently concerned with characteristics of a place to live. Topping the list of characteristics of place to live which are most different in the frequency of being rated as of high importance by migrants and non-migrants, are friends nearby and relatives nearby (the non-migrants more frequently rate them of high importance). This difference is made more explicit in Table 9 which shows the characteristics of first job and first place to live which have significant differences in frequency of being rated important by the migrants and non-migrants.

So to the question, "Why do they migrate?", the answer from the findings of this study indicate that the migrants are more frequently concerned about the characteristics of their first job, specifically its starting pay, fringe benefits and opportunities for advancement.

MIGRATION DECISION MAKING PROCESS

Findings of the study concerning the decision making process for deciding whether or not to migrate are presented in terms of amount of thought, amount of choice, certainty in type of job wanted, assistance by others, and satisfaction with the decision. Each is presented separately below.

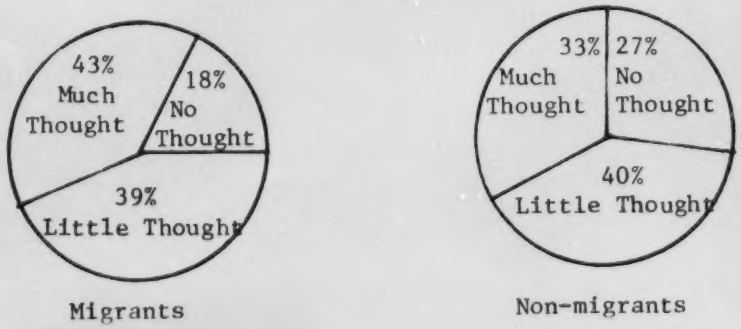
Table 9

Specific Characteristics of First Job and First Place to Live with Significant Differences Between Migrants and Non-Migrants in Frequency of Rating as Much or Great Importance

Characteristics	More frequently rated as much or greater importance by migrants	More frequently rated as much or great importance by non-migrants
Characteristics of first job	Starting pay Fringe benefits Opportunity for advancement	Convenient location
Characteristics of first place to live	Opportunities for further education or training Public transportation available	Friends nearby Relatives nearby Leisure activities Medical care available Quality of public schools Climate Quality of environment Physical safety Pleasantness of living

Amount of Thought

The migrants gave more thought to the decision of whether to move or not (see Figure 17). Forty-three percent of the migrants reported they gave the decision much thought, as compared to 33 percent for the non-migrants. A greater percentage of the non-migrants (27%) gave the decision no thought while 18 percent of the migrants reported no thought.



Migrants Non-migrants

Figure 17. Amount of thought given to decision to migrate by migrants and non-migrants

Amount of Choice

The migrants had a greater choice of jobs than did the non-migrants (see Figure 18). Over half of the migrants (55%) chose from two or three jobs as compared to 47 percent for the non-migrants. Nearly as many non-migrants (42%) felt they had no choice, while only half that many migrants (23%) thought they had no choice. Twice as many migrants (22%) had good choice of jobs which was defined as a choice of four or more jobs.

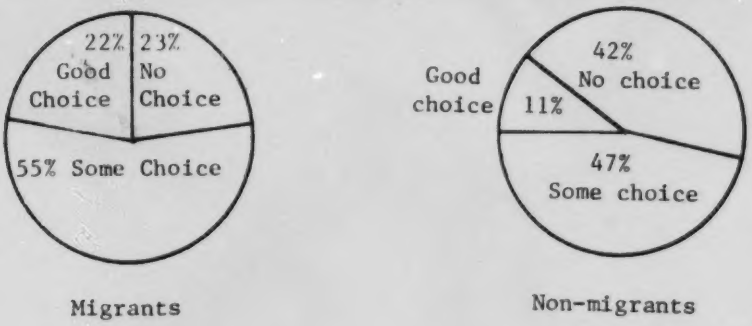


Figure 18. Amount of choice in jobs available to migrants and non-migrants.

Certainty in Type of Job Wanted

The migrants chose their first job after graduation with somewhat less certainty about the type of job they wanted than did the non-migrants (see Figure 19). Only 24 percent of the migrants had a high degree of certainty (knew exactly what job they wanted) in that choice as compared to 33 percent of the non-migrants. Fifty-eight percent of the migrants and 50 percent of the non-migrants had a moderate degree (had some idea of the type of job they wanted) of certainty in choosing their first job.

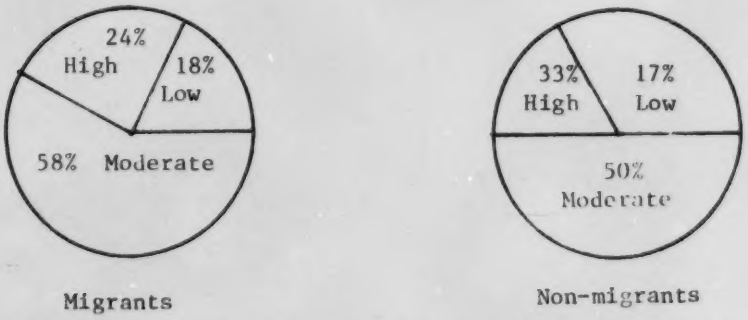


Figure 19. Degree of certainty with which the first job was chosen

Assistance by Others

When asked to indicate who had helped the migrants make the decision about where to work, the highest percentage of responses (33%) was given to "no one" (see Figure 20). In descending order, other helpers were friends (26%); parents (23%); teachers (23%); spouse (15%); other (12%); siblings (10%); counselor (7%); and other relatives (4%). For each source of assistance except parents and no one, the migrants cited the source at a higher rate than did the non-migrants. Parents were cited much more often as a source of help in making the decision of where to work by the non-migrants whereas teachers were much more often cited by the migrants.

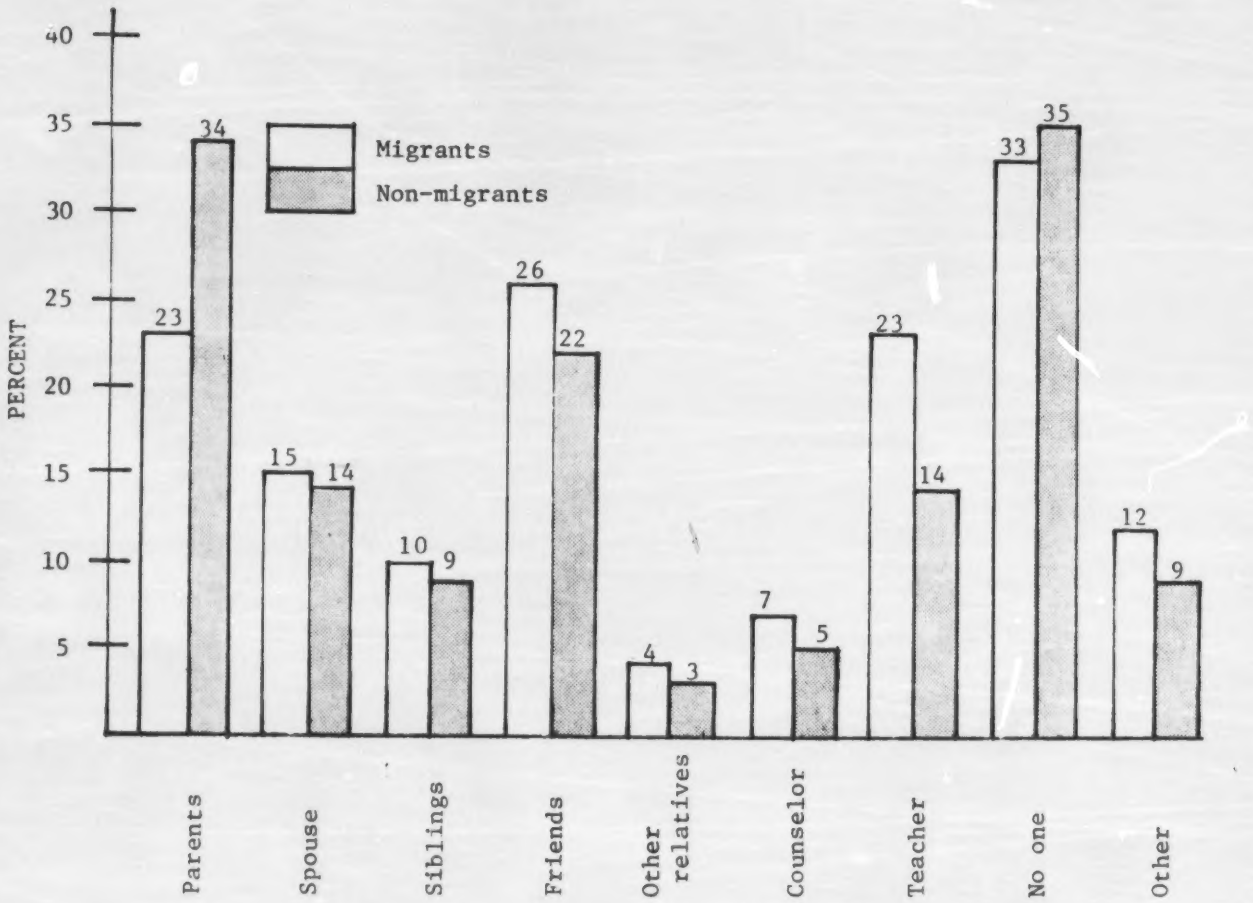


Figure 20. Sources of assistance in migration decision process for migrants and non-migrants

Satisfaction With Decision

The migrants were less satisfied with their decision, as indicated by their willingness to choose the same community if they could decide where to work all over again (see Figure 21). Twenty-seven percent of the migrants as compared to 17 percent of the non-migrants responded that they would not choose the same community again if given the opportunity. Forty-nine percent of the migrants and 56 percent of the non-migrants would make the same choice again while a slightly larger percent of the non-migrants (27%) were unsure.

Figure 21. Satisfaction with migration decision by migrants and non-migrants.

Discussion of Findings About Decision-Making Process

In general, the migrants appear to have had more jobs to choose from than did the non-migrants. This finding is in accord with both the migrants' and non-migrants' perception that there were few employment opportunities in their community of origin. Also supported is the notion that the larger geographic area considered for employment (assuming this is true for the migrants), the more employment opportunities one is likely to find.

In further analysis of the data (not reported here), there did not seem to be a relationship between amount of thought given to the decision to migrate and willingness to choose the same community over again as a place to work. In fact, 41 percent of the migrants who indicated they would not choose the same place to work again gave their decision much thought. These findings lead one to question the exact nature of the decision making process used by the graduates, particularly where evidently much thought had been given to

the process. Perhaps the graduates need more information about the realities of potential places of work and ways to think about this information in relation to themselves. This implication seems to be supported by the finding that the migrants, with their greater choice of jobs, were more uncertain of the type of job they really wanted. And, the largest percentage of migrants felt that no one had helped them in choosing a place to work. Further, when assistance was obtained, it came at about the same rate from friends and parents as from teachers; and the assistance came at a much lower rate from counselors. Assuming that teachers and counselors have more and better information than friends or parents about the jobs available to graduates of particular vocational education programs, it would be expected that the greater participation of teachers and counselors in the decision making process would improve the graduates satisfaction with their choice of a place to work.

In summary, the migrants seem to have more job opportunities to choose from, have less certainty about the type of job they want, give more thought to the decision of where to work, get more assistance from teachers (but still rely heavily on themselves, friends or parents) and, in the end, are more frequently less satisfied with their decision than the non-migrants. This would seem to be a "natural" situation for demonstrating improvement through additional instruction and assistance in the career decision making process--the students should be receptive (they are thinking about the problem) and in need of better information about themselves and their environment and how to "handle" this information.

Chapter V

WHERE DO THE MIGRANTS GO?

The response to the question of where do the migrants go can be answered in several ways--distance traveled, population outside of Southwest Minnesota, proportion going to other specific areas of the state, and proportion eventually returning to Southwest Minnesota. Each of these will be addressed in a summary way in this chapter.

DISTANCE TRAVELED

In general, the largest proportion of graduates of the AVTI's in Southwest Minnesota did not move very far from the community in which they resided before attending an AVTI. Figure 22 shows that about half of the graduates first lived in or within 25 miles of their community of origin after leaving the AVTI. About two-thirds lived within 75 miles. Only 23 percent of the graduates lived more than 100 miles away from their community of origin after leaving an AVTI.

OUTSIDE OF SOUTHWEST MINNESOTA

Seventy-five percent of all the respondents were living in Southwest Minnesota after leaving an AVTI (see Figure 23). Using the definition of migrant as being those who moved more than 50 miles from their community of origin, 42 percent of the migrants were living in Southwest Minnesota and 58 percent had left the Southwest area (see Figure 24).

Moving to Other Specific Areas of the State

The migrants tended to move to larger towns and cities than their community of residence before attending the AVTI. The median population for their communities of origin was 1,712 whereas, the median population for the first place they lived after leaving the AVTI was 14,232. Ten percent of the total group of graduates (or about one-third of the migrants) who responded to the survey had moved to Hennepin and Ramsey Counties (see Figure 25).

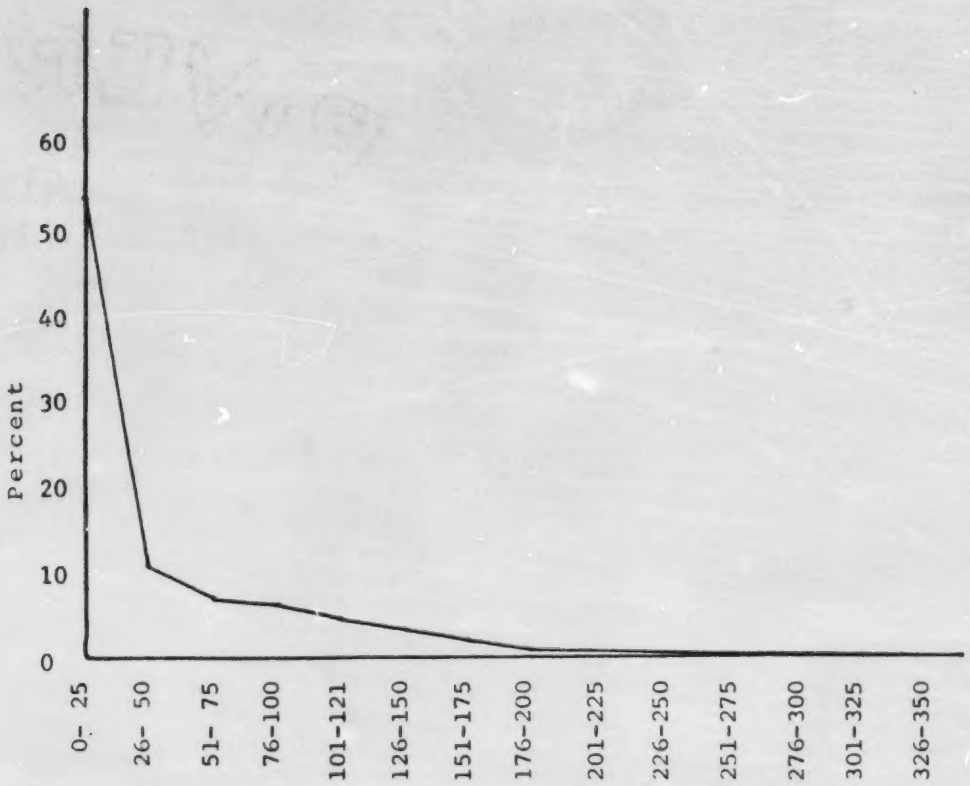
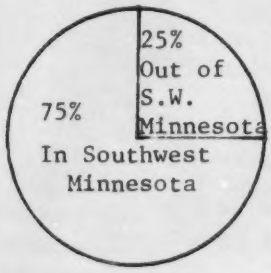
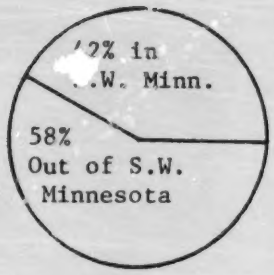


Figure 22. Distance first lived from community of origin after leaving an AVTI for all respondents.



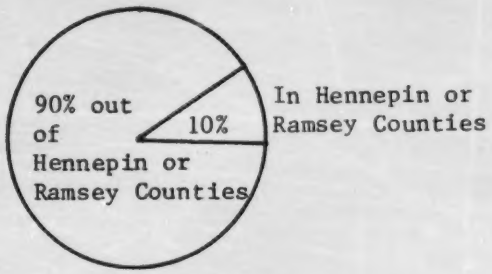
All Respondents

Figure 23. Percent of respondents living outside of Southwest Minnesota after leaving the AVTI.



Migrants

Figure 24. Percent of migrants living outside of Southwest Minnesota after leaving AVTI.

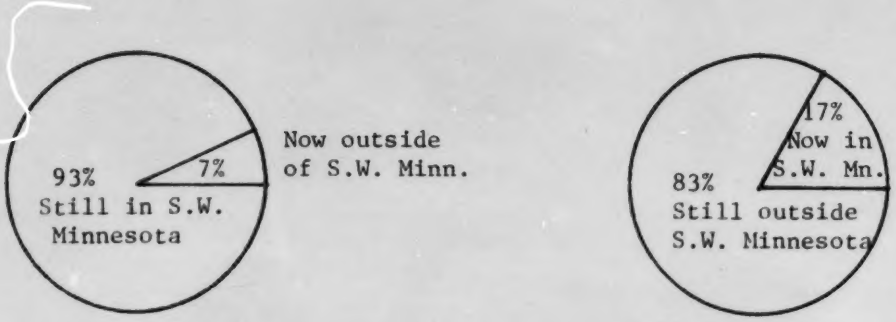


All Respondents

Figure 25. Percent of respondents living in Hennepin or Ramsey counties.

Return Migration to Southwest Minnesota

Of the graduates who took a first job located in Southwest Minnesota, 93 percent still resided in Southwest Minnesota at the time of the survey (one year later for graduates of 1979 and three years later for graduates of 1977) (see Figure 26). Of those graduates whose first job was outside of Southwest Minnesota, 17 percent had returned to Southwest Minnesota at the time of the survey.



First job in S.W. Minnesota

First job outside of S.W. Minnesota

Figure 26. Later migration out of Southwest Minnesota and return migration to the Southwest area.

Discussion Concerning Where the Migrants Go

Overall, most of the graduates of AVTI's in Southwest Minnesota do not move very far from the community in which they lived prior to attending an AVTI. The finding that the migrants are moving to larger communities than those from which they come (which was true for 87% of the migrants) implies that the rural to urban migration stream for this group of young people is continuing even though this trend may be reversing for other age groups. However, the study did negate the speculation that a large proportion of the graduates moved to the Minneapolis-St. Paul area for their first job.

Chapter VI

A STRUCTURE FOR THINKING ABOUT GEOGRAPHIC MIGRATION OF POST SECONDARY VOCATIONAL EDUCATION GRADUATES IN RURAL AREAS

The findings of the study presented in this chapter represent a combination of information and ideas obtained from the review of other studies about geographic migration and from the results reported in previous chapters in this report. The latter results are specific to the sample of graduates from Southwest Minnesota used in this study. First a more general structure or model for thinking about migration will be described and then the findings of this study will be added in order to make the structure more useful for thinking specifically about post secondary vocational education graduates in a rural area such as Southwest Minnesota. As such, the final structure presented represents the major conclusions of this study and a basis for asking questions to be addressed by future studies concerning geographic migration of post secondary vocational education graduates.

GENERAL STRUCTURE FOR THINKING ABOUT GEOGRAPHIC MIGRATION

Figure 27 provides a graphic representation of the structure which was developed to describe the process by which the geographic migration decision gets made. The "community of origin" is the place where the potential migrant lives before attending the AVTI. The "community of destination" is the one or more communities that are the potential places which are considered as places to which to move. Each of the communities (origin and destination) has a "place utility" which is the level of actual or expected satisfaction which the potential migrants derive (could derive) from the respective communities. There are many social, cultural, and economic factors that enter into the determination of place utility for a particular individual. The place utility of the same community may vary among individuals as they evaluate and consider different factors more, or less important. Place utility can be thought of as being the result of a factual belief, evaluation, and importance rating of each of the different factors as they relate to a particular community. Factual belief is what the graduate perceives to be as the

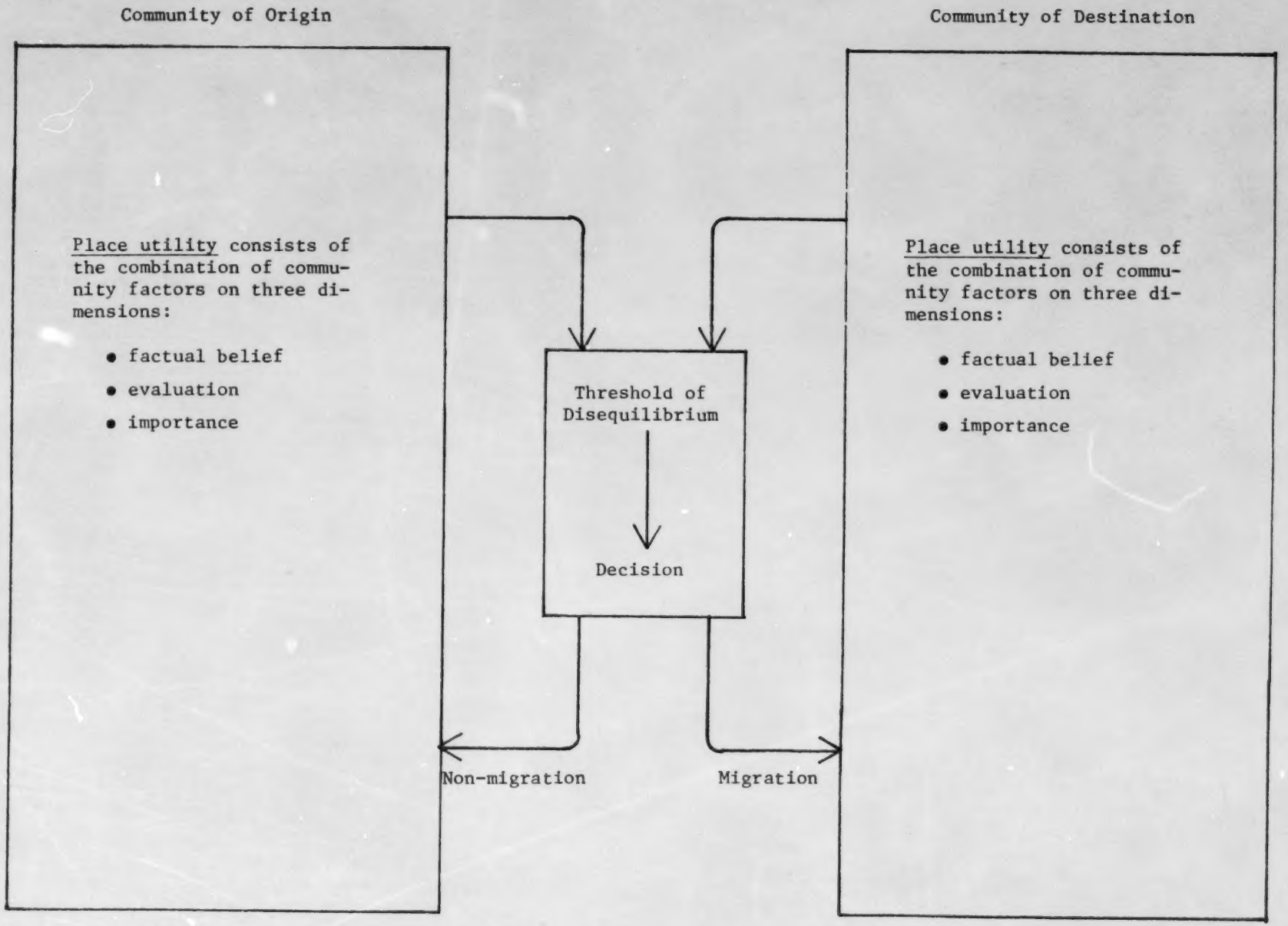


Figure 27. Structure of the geographic migration decision process.

actual status of a factor. For example, exactly how many job opportunities are they likely to have in the community. Evaluation refers to whether or not the graduate considers more of the factor as being desirable (positive) or undesirable (negative). For example, the more relatives nearby may be positive for some graduates and negative for others. Importance rating refers to just how essential the factor is to the graduate in selecting a community or job. For example, starting pay may be very important for some graduates while others, being close to friends is much more important. Place utility of a community is thought to be the resulting combination from considering each factor along the above three dimensions.

Accordingly, the place utility of different communities is thought about by individuals from time to time. When the place utility of the community of origin becomes less than the place utility of some community of destination, the "threshold of disequilibrium" has been reached and the value of another community is perceived to outweigh the value of the community of origin. When this imbalance has been reached, the individual has two major options: (1) adjust in some way and stay in the community of origin or (2) move to the community of destination. The consideration of these options is termed the "decision" in the proposed structure in Figure 27.

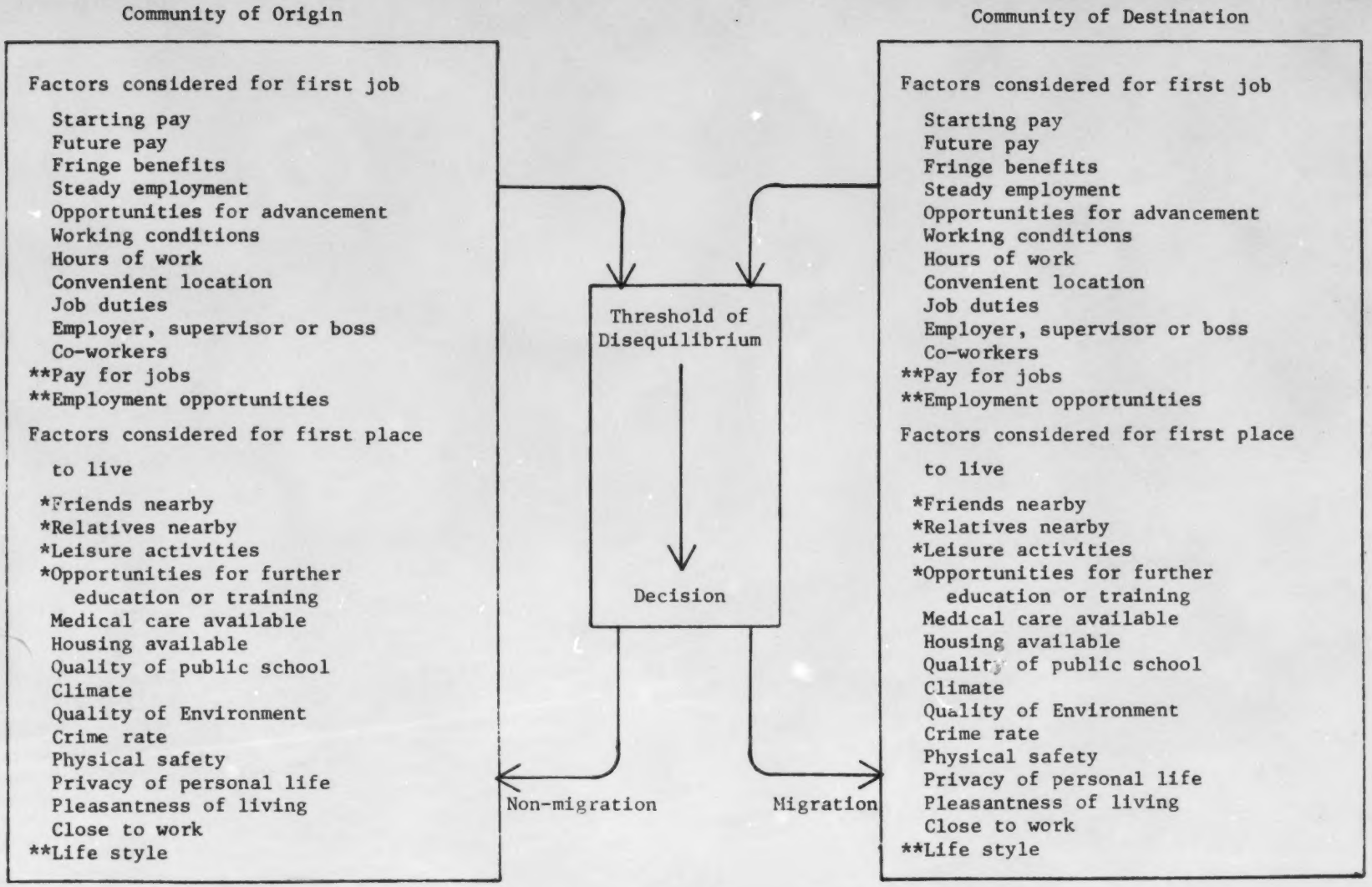
SPECIFIC STRUCTURE FOR THINKING ABOUT THE GEOGRAPHIC MIGRATION OF POST SECONDARY VOCATIONAL EDUCATION GRADUATES IN RURAL AREAS

What makes the structure most specific to the thinking about geographic migration of post secondary vocational education graduates in rural areas is the evaluation and relative importance of various factors which "go into" the process of determining place utility of a particular community. From the review of past studies, discussions with AVTI personnel, and original thought by the investigators, lists of potential factors relevant to new vocational education program graduates were posited. These factors were thought to exist in both the community of origin and the community of destination. However, due to constraints within the study, a more condensed version of the factors and their evaluation was considered in the community of origin. A more extensive list, divided into factors considered in selecting a first job

and factors considered in selecting a first place to live, was rated by the vocational education graduates on importance in choosing a community of destination. These factors are identified in Figure 28.

In the study described in this report, an attempt was made to determine the relative evaluation and importance of these factors for the new graduates and to distinguish between those graduates who decide to migrate and those who decide to stay. The relative importance of the factors can be summarized by showing the rate at which the factors were rated as of much or great importance in the graduate's decision about first job and first place to live. This information on importance is presented in Figure 29; the factors are listed in decreasing order of rate of identification as a factor of much or great importance. The percent of graduates rating the factor as of much or great importance is shown in parentheses following the name of the factor. As is evident, the factor cited most frequently of high importance in choosing a first job was steady employment, whereas for first place to live the factors were pleasantness of living and closeness to work.

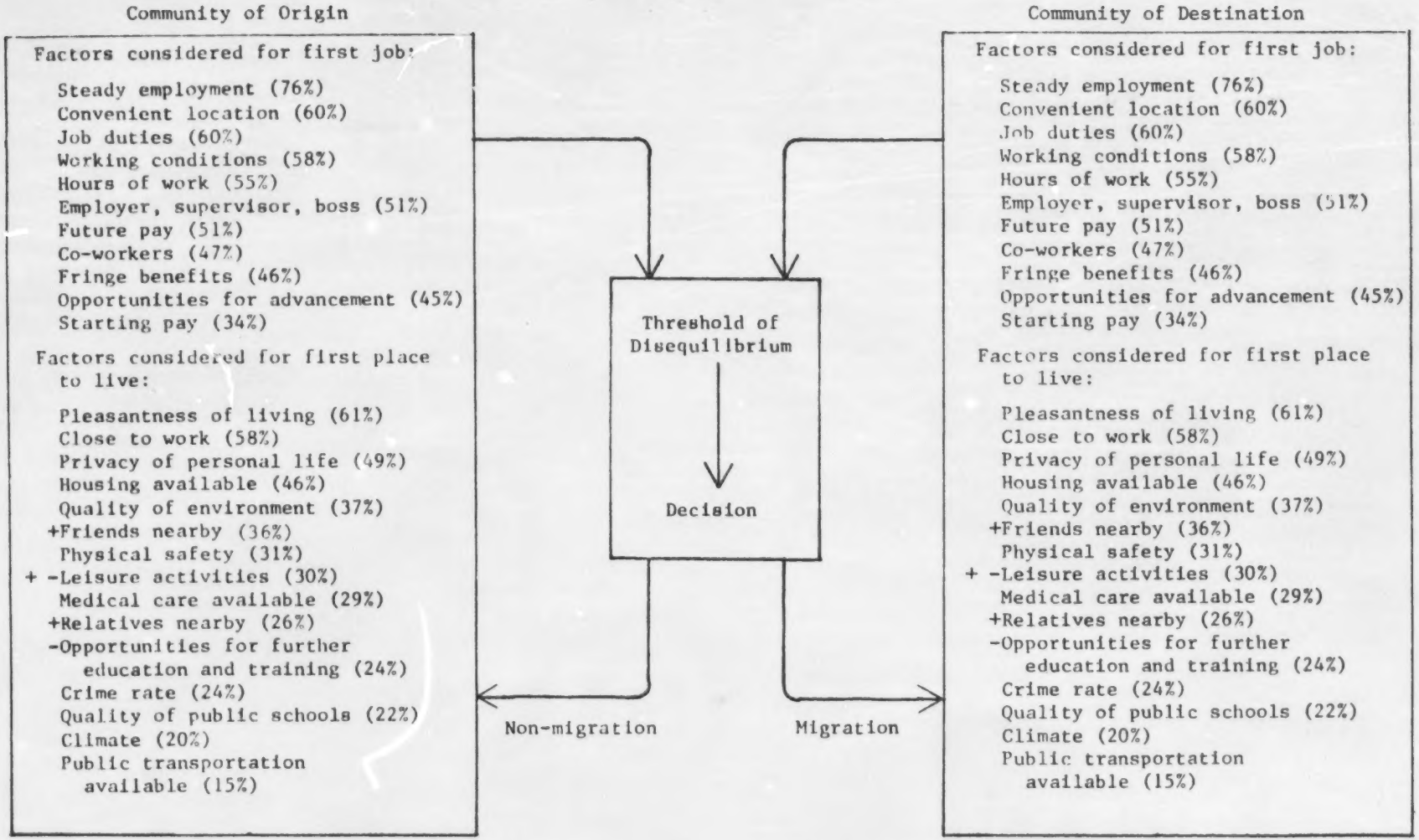
To distinguish between those who decide to move and those who decide to stay, another step in the analysis was necessary. One needs to examine the relative differences in evaluation and importance attached to the factors between movers and stayers. Figure 30 shows the results of this examination. In this table, the factors with significant differences in rate of factor ratings of much or great importance is highlighted by factors which are typed in italics. The factors more frequently rated of higher importance by the migrants are preceded by an "M"; similarly, the factors more frequently rated of high importance by the non-migrants are preceded by an "N". This last figure provides a summary of how the findings of this study can be used to envision the similarities and differences between migrants and non-migrants, in terms of factors which are related to the decision to move or stay, respectively. The factors which tend to differentiate between migrants and non-migrants, and which are more often important to the migrants are: fringe benefits, opportunity for advancement, and starting pay in terms of first job; and opportunity for further education and training, and availability of public transportation for first place to live.



Note. * Indicates factors also evaluated in the community of origin

** Indicates factors evaluated in the community of origin but not rated on importance in the community of destination.

Figure 28. Factors thought to be important to post secondary vocational education graduates in rural areas in deciding to migrate or not.

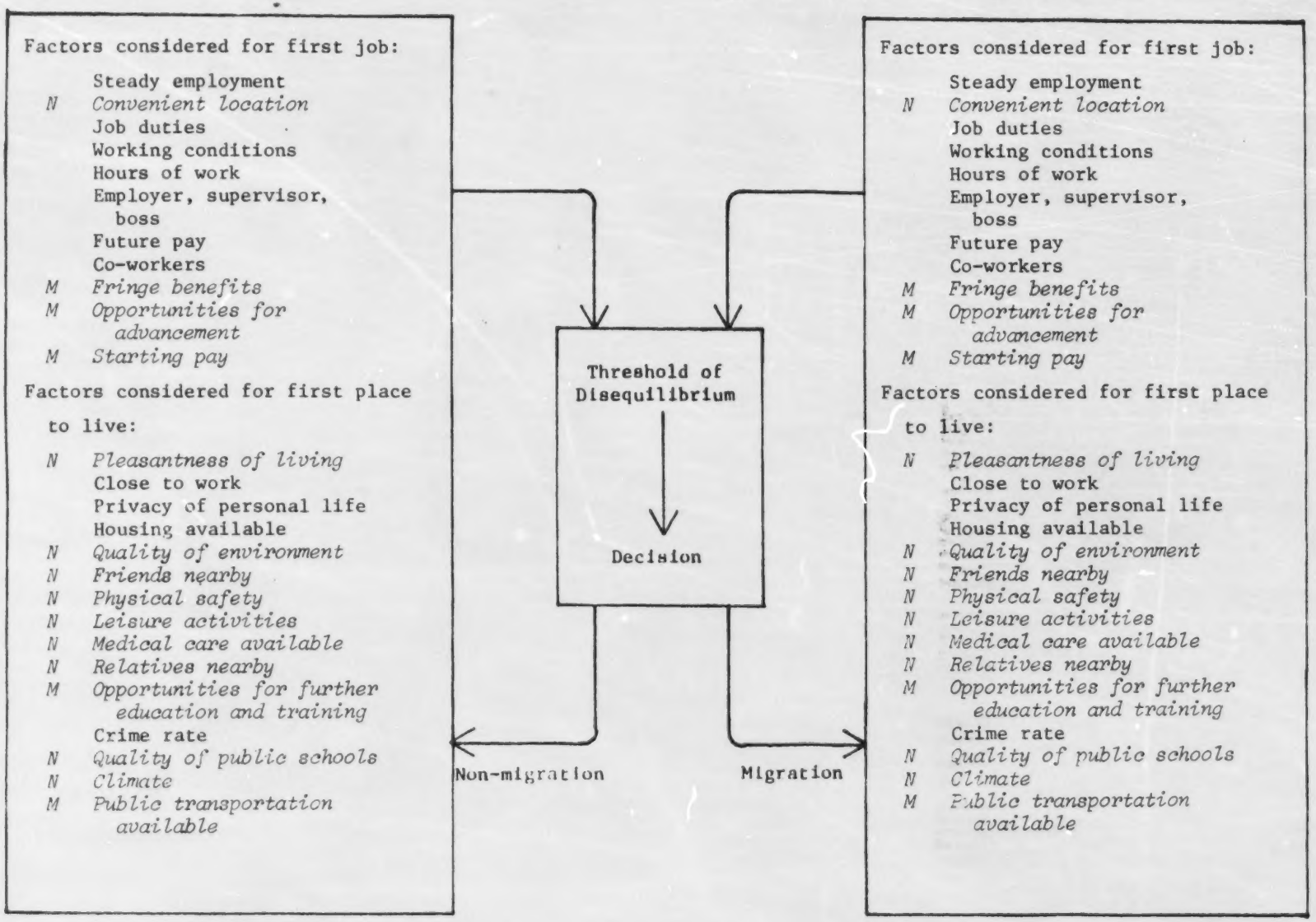


Note. + Evaluated as being positive in the community of origin by both migrants and non-migrants.

\- Evaluated as being negative in the community of origin by both migrants and non-migrants.

+ - Evaluated as being positive by the non-migrants and negative by the migrants.

Figure 29. Importance of factors to graduates of post secondary area vocational technical institutes in Southwest Minnesota (listed from high to low in frequency of rating of high importance).



Note. "N" indicates more frequently important to non-migrants, "M" indicates more frequently important to migrants.

Figure 30. Factors (in italics) distinguishing between migrants and non-migrants in frequency of rating of high importance for graduates of post secondary area vocational-technical institutes in Southwest Minnesota.

Chapter VII

STUDY RECOMMENDATIONS

From this study and the review of related past studies, it is apparent that the geographic migration decision making process is complex and multi-faced. There are no simple ways to predict who the migrants will be, what will cause them to migrate or where they will migrate. The recommendations which follow are presented in two parts: for practice and for further study.

RECOMMENDATIONS FOR PRACTICE

The audience for the following recommendations includes those who have the opportunity to change the way in which the migration decision is made so that things "come out better." One must recognize that what is "better" may be perceived differently by student, parent, spouse, labor market information specialist, teacher, vocational education administrator, school board member, counselor, taxpayer, and employer. For some it may seem better for new AVTI graduates to return to their home community or at least stay in the general geographic area; for others, it may seem better for new graduates to move out of the area. The position taken in this report is that it is best for the students to act with as complete information as possible about the factors they consider important in judging the "place utility" of a particular community. Given this position, the following recommendations seem in order.

Potential Students of Vocational Education Programs

- Before entering a post secondary vocational-technical institution and enrolling in a vocational program, gather information on the types of occupations to which the program of interest may lead. Then, determine if employment opportunities in these occupations are located in an area where you would like to live.
- Learn and practice a decision-making process that may be used in choosing a place to live and work.
- Dedicate sufficient thought to the decision of place to live and place to work.

- Seek assistance from vocational-technical institute staff, labor market information specialists and employers in making a decision of where to live and work.

Vocational Educators (i.e., Teachers, Administrators, Counselors)

- Provide information to students about the types of occupations where the skills taught in the vocational-technical education program can be used, where these occupations are located, and characteristics of the communities in which employment opportunities exist.
- Teach students a decision-making process that may be used in choosing a place to live and to work.
- Assist students in locating and assembling other information they would like or need in their migration decision-making.

Labor Market Information Specialists

- Provide vocational-technical institutes' staff (or students directly) with information about the occupational employment opportunities in and outside the geographic area and the characteristics of these occupations (i.e., starting pay, future pay, fringe benefits, opportunity for advancement).
- Provide employers with information about the factors important to new graduates in choosing a first job and first place to live.
- Consider the inclusion of information about the characteristics of the community in which an employment opportunity is located.

Employers

- Provide the labor market information specialist, vocational-technical institute staff and students with information on occupational employment opportunities, the characteristics of these occupations and the characteristics of the community in which the opportunities are located.
- Some of the factors considered important by new graduates are alterable by employers (i.e., starting pay, advancement opportunities); changes in the status of these factors for

particular occupations should be considered as one option to making a place to work or live more attractive.

RECOMMENDATIONS FOR FURTHER STUDY

The migration decision making process can be further illuminated by additional study. Some of the problem areas which merit immediate consideration are:

1. Determine the actual status of important factors for migrants in the community of origin and destination (i.e., were there more employment opportunities, was pay higher, were there more leisure activities).
2. Past studies have implied that there are different approaches to the migration decision making process. An analysis should be made if these different approaches use different characteristics of job or place to work.
3. Alter the questionnaire to provide more interval data and to allow more powerful statistical analysis.
4. Conduct a limited test/retest inquiry into reliability of response over time. Summary questions for each section could be refined to aid in examining the internal consistency of responses on the questionnaire.
5. Conduct a longitudinal study of the graduates who were a part of this study in about 2 or 3 years to determine change in location and again assess the factors which affected the decision to migrate.

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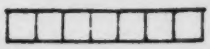
APPENDIX A
QUESTIONNAIRE



Questions About Your Place of Work and Living

You are being asked to help in a study of the location of former students of Area Vocational-Technical Institutes (AVTI's) in Southwestern Minnesota. Your were selected to be included in this study because you were enrolled in one of these AVTI's.

We want to know information about your decisions of where to live and work. We would like to know how these decisions were made and what factors helped you decide.

Please help us by completing this form and returning it in the enclosed enveloped. By returning the form, you are indicating that you have read the information above and have decided to participate in our study.

BEFORE ATTENDING THE AVTI

1. What was your last address before attending the AVTI?

   _____
   _____
   _____

2. Where did you live? (Check One)
   _____ in the town or city
   _____ in a rural area, not on a farm
   _____ in a rural area, on a farm

3. How long did you live there? _____ years

4. In your opinion, how would you describe that community? For each of the following items, check the one response which best descrices that community.

A. Lifestyle	____too conservative	____just right	____too liberal
B. Employment opportunities	____few	____medium	____many
C. Pay for jobs	____low	____medium	____high
D. Opportunity for further education or training	____poor	____medium	____good
E. Friends nearby	____not enough	____just right	____more than enough
F. Relatives nearby	____not enough	____just right	____more than enough
G. Leisure activies	____not enough	____just right	____more than enough

5. Overall, how did you feel about that community? (Check One)

   _____ dissatisfied _____ undecided _____ satisfied

WHILE AT THE AVTI

6. Which program were you last enrolled in at the AVTI? _____
(Title)

7. How long was that program? _____weeks

8. How did you do in the program? (Check One) _____not very well
_____quite well
_____very well

9. Did you graduate from the [illegible]ram? _____yes _____no

WHEN YOU LEFT THE AVTI

10. What was your age? _____

11. Were you? _____single _____married _____other

12. What is your sex? _____male _____female

13. What was the name and address of the first place you worked at after leaving the AVTI?

_____
_____
_____

14. What was your job title? _____

15. What were your major duties on that job? _____

16. How important were the following factors in choosing that first job? Rate each of the following factors by circling the letter that best represents the importance of the factor.

		Importance rating				
		None	Little	Some	Much	Great
A.	Starting pay	N	L	S	M	G
B.	Future pay	N	L	S	M	G
C.	Fringe benefits	N	L	S	M	G
D.	Steady employment	N	L	S	M	G
E.	Opportunities for advancement	N	L	S	M	G
F.	Working conditions	N	L	S	M	G
G.	Hours of work	N	L	S	M	G
H.	Convenient location	N	L	S	M	G
I.	Job duties	N	L	S	M	G
J.	Employer, supervisor or boss	N	L	S	M	G
K.	Co-workers	N	L	S	M	G
L.	Other factors important to you (specify) _____					

17. How much choice did you have in selecting that first job?

_____No choice: It was the only job available.

_____Some choice: I chose from two or three job possibilities.

_____Good choice: I chose from four or more job possibilities.

18. When choosing that first job, how certain were you in knowing the type of job you wanted?

_____I really didn't know what type of job I wanted.

_____I had some idea of the type of job I wanted.

_____I knew exactly what type of job I wanted.

Now think about the first place you lived after you finished at the AVTI.

19. What was your first address after you left the AVTI?

_____

_____

20. Did you live _____in the town or city

_____in the rural area, on a farm

_____in the rural area, not on a farm

21. How important were the following factors in choosing that first place to live? Rate each of the following factors by circling the letter that best represents the importance of that factor.

		Importance rating				
		None	Little	Some	Much	Great
A.	Friends nearby	N	L	S	M	G
B.	Relatives nearby	N	L	S	M	G
C.	Leisure activities	N	L	S	M	G
D.	Opportunities for further education or training	N	L	S	M	G
E.	Medical care available	N	L	S	M	G
F.	Housing available	N	L	S	M	G
G.	Public transportation available	N	L	S	M	G
H.	Quality of public schools	N	L	S	M	G
I.	Climate	N	L	S	M	G
J.	Quality of the environment (for example, pure air and water)	N	L	S	M	G
K.	Crime rate	N	L	S	M	G
L.	Physical safety	N	L	S	M	G
M.	Privacy of personal life	N	L	S	M	G
N.	Pleasantness of living	N	L	S	M	G
O.	Close to work	N	L	S	M	G
P.	Other factors important to you (specify) _____					

ABOUT YOUR DECISIONS

22. Which was more important? (Check One) _____the place to work
_____the place to live
_____both equally important

23. After you left the AVTI, did you move to a community different from the one you lived in before you attended the AVTI? _____yes _____no

If yes, which was more important in making the decision to move? (Check One)

_____The things you didn't like about the first community.

_____The things you liked about the new community.

_____Both were equally important.

24. How much thought did you give to the decision to move from or to stay in the same community? (Check One)

_____No thought _____Little thought _____Much thought

25. Who helped you to make the decision of where to work? (Check all who helped)

_____Parent/Guardian
_____Spouse
_____Brother or sister
_____Friend
_____Other relative
_____Counselor
_____Teacher
_____No one
_____Other (please specify)
_____

26. If you could decide where to work all over again, would you choose the same community?

_____Yes _____No _____Unsure

NOW

27. Is your present job the same as your first job after leaving the AVTI?

_____Yes. If yes, thank you for completing the form. This is the last question for you.

_____No. If no, please complete the following questions.

28. What is your present job title? _____

29. What are your major duties? _____

30. What is the name and address of the place where you now work?

_____
_____
_____

31. What is the address where you now live?

_____
_____

THANK YOU

Please place your completed form in the return mail today.

No postage is necessary

If you have any questions about this study or questionnaire, please call 507/359-4521

APPENDIX B
COVER LETTER

SAMPLE COVER LETTER

We need your help! We are working with a study to see why some of our graduates move out of Southwest Minnesota and others stay. As one of our former students, we would like you to help us with this study. You can do this by filling out the short form enclosed with this letter. Return to us in the stamped, self-addressed envelope. Try to do this as soon as you can.

Your answers will remain confidential. Only summary data for those who fill out this form will be reported.

Your answers will help us to learn more about our students, especially about what is important to them in seeking their first job and place to live.

Thank you so much for your help.

Sincerely yours,

Director

/js

Enclosures

APPENDIX C
OCCUPATIONS SELECTED BY MIGRANTS FROM EACH VOCATIONAL EDUCATION PROGRAM

Table 10

Occupations Selected By Migrants From
Each Vocational Education Program

Programs and occupational groupings		Percent
Accounting (N=68)		
Clerical occupations		63
Supervisors	2	
Clerical, except equipment operators	9	
Bookkeepers, billing, accounting and audit clerks	53	
Management related occupations		24
Marketing and sales occupations		6
Computing and office equipment operators		3
Miscellaneous occupations		4
Agri-business (N=49)		
Marketing and sales occupations		41
Supervisors	8	
Sales occupations, commodities	22	
Other sales	10	
Officials and administrators		22
Management related occupations		14
Agriculture and related occupations		12
Machine operators and tenders		4
Miscellaneous occupations		7
Auto mechanics (N=30)		
Auto mechanics		80
Heavy equipment mechanics		3
Helper; vehicle and mobile equipment mechanics and repairers		3
Miscellaneous occupations		14

continued

Table 10 (continued)

Carpentry (N=15)		Percent
Supervisor; carpentry and related occupations		7
Carpenters		80
Helpers; carpenters and related occupations		7
Miscellaneous occupations		7
Clerical (N=41)		
Clerical occupations, except equipment operators		83
Secretaries	20	
Typists	15	
Receptionists	12	
Miscellaneous clerks and typists	36	
Wholesale and retail trade supervisors		2
Salesclerks		2
Miscellaneous occupations		13
Drafting (N=33)		
Drafting occupations		94
Miscellaneous occupations		6
Electronics (N=48)		
Engineering and related technologists and technicians		65
Electronic technicians	56	
Engineering technicians not otherwise classified	4	
Drafting occupations	4	
Electrical and electronic equipment repairers		11
Officials and administrators		4
Electrical and electronic engineers		2
Computer engineers		2
Computer scientists not otherwise classified		2
Computer operator		2
Electrician		2
Miscellaneous occupations		10

continued

Table 10 (continued)

Farm business (N=9)		Percent
General farmer		33
General farm workers		33
Manager livestock, dairy and poultry farmer		11
Livestock worker		11
Guards and police, except public service		11
Machine tool (N=39)		
Precision assemblers (metal)		56
Tool and die maker		13
Pattern maker and model makers (metal)		5
Machine setup operators		8
Machine operators and tenders		8
Miscellaneous occupations		10
Practical nursing (N=43)		
Licensed practical nurse		95
Nurse aides, orderlies, attendants		2
Miscellaneous occupations		2
Sales (N=67)		
Sales occupations, commodities		55
Technical sales workers and service advisors	3	
Sales representatives	3	
Sales persons, commodities	49	
Wholesale and retail trade supervisors		16
Sales related occupation		3
Officials and administrators		6
Miscellaneous occupations		20

continued

Table 10 (continued)

Secretarial (N=102)		Percent
Clerical occupations, except equipment operators		87
Secretaries	45	
Receptionists	10	
Typists	8	
Bookkeepers, accounting and auditing clerks	5	
Stenographers	3	
Miscellaneous clerical occupations	16	
Service occupations, except private household and protective		5
Miscellaneous occupations		8
Nurse aide (N=14)		
Nursing aides, orderlies, attendants		43
Teachers, except college and university		36
Licensed practical nurse		7
Miscellaneous occupations		14
Welding (N=26)		
Welders and cutters		81
Metallurgical and materials engineer		4
Aircraft mechanic		4
Millwright		4
Miscellaneous precision metal workers		4
General farmer		4